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ART. I. RULES *to prevent and exterminate* CONTAGIOUS FEVERS. By JOHN HAYGARTH, M. D. F. R. S. L. and E. Communicated to the Editors by DAVID HOSACK, M. D. F. R. S. &c.

TO THE EDITORS OF THE

NEW-YORK MEDICAL AND PHYSICAL JOURNAL.

New-York, May 31, 1823.

GENTLEMEN,

I HAVE lately received from Dr. Haygarth, the accompanying papers relative to the means of preventing and arresting the progress of contagious fevers; and a plan prcposed for their extermination.

As our country, during the past year, was visited by fever of this description, and our commerce with the West Indies, and other intertropical countries, exposes us to returns of the same calamity, the communications I enclose have, at this time, a peculiar value: when too, it is recollected that they come from, and are the result of, the repeated observations and experience of that celebrated physician and philanthropist, Dr. Haygarth, to whom the world is indebted for the first suggestion and successful establishment of institutions

for the purpose of arresting the progress of malignant and contagious fevers, I trust you will think it expedient to give the enclosed papers a place in your valuable Journal, where they may be permanently preserved, and may be the means of contributing to the same beneficial results in this country that they have already effected in Europe.

I am, gentlemen,

Respectfully yours,

DAVID HOSACK.

To Drs. Francis and Beck.

DR. HAYGARTH'S RULES.

In 1740 and 1741, an epidemic in Ireland was computed to have been fatal to 80,000 people. A letter from a very eminent physician in Dublin, dated the 9th March, 1819, relates, that "the fever within this week appears to be on the increase. We have been obliged to refuse several at Sir Patrick Dunn's. I am told there is an overflow in Cork-street. Drs. Cheyne, Clark, Barker, and Crampton, are visiting the provinces of Leinster, Ulster, Munster, and Connaught, to ascertain the state of the country with regard to disease, and the cause of it. In the counties of Wexford and Wicklow, which, in September, 1817, were reported to be comparatively free, the disease now prevails. Infection has been sent back to the country by the beggars expelled from Dublin: of this, Dr. Cheyne produces many striking and convincing instances."

To understand the cause of this calamity, it is necessary to know that the typhous contagion *generally* remains in a *latent* state, after it has been received into the body, from *ten days to ten weeks;* so that "one infected by this fever may travel in perfect health from and to the remotest part of the United Kingdom." A warning of this danger was given in the Bath Chronicle on the 24th of June, 1818. Since that time many hundreds of poor people, especially beggars, having caught the infection, have been travelling in all directions throughout England and Scotland: wherever these infected travellers fall

ill of the fever, in small and dirty houses, the contagion spreads in the family, and is often communicated to their poor neighbours; it commonly afflicts a poor family for months together, because the inmates who are infected by the patient first attacked fall ill after a latent period of several weeks. During all this time, the sick family must be maintained by the parish. As this tax is generally paid by farmers and other tenants, it must utterly ruin them, by adding such a very heavy expense to a load which they are now scarcely able to bear. By such an enormous increase of poor-rates, wherever this contagious fever is allowed to spread, what distress must ensue, not only among the lower, but all classes of society.

From long, extensive, and successful observations and experience in various situations, and by different medical witnesses of the highest respectability, there is the clearest and most convincing evidence to prove, that the United Kingdom may be preserved from these, and many other calamitous effects of the prevailing Epidemic, by the following

Rules of Prevention.

"It may be proper previously to observe, that an infectious fever, in a small, close, and dirty room, is caught by a very great proportion of mankind; not less than by twenty-two out of twenty-three, or a still higher proportion; but in a large, airy, clean apartment, even putrid fevers are seldom or never infectious. When the poisonous vapour is much diluted with fresh air, it is not noxious. From a large collection, and an attentive consideration of facts relative to this distemper, have been formed the following Rules:

"1. As safety from danger entirely depends on cleanliness and fresh air, the room-door of a patient ill of an infectious fever, especially in the habitations of the poor, should never be shut; a window in it during the day ought to be frequently opened. In bad cases, a current of air, between a window and door both wide open, may be proper: if the air be very cold or damp, the curtains of the patient's bed may be drawn close during this ventilation, should peculiar circumstances require

such cautions. These regulations would be highly useful, both to the patient and nurses; but are particularly important previous to the arrival of any visiter.

"2. The bed-curtains should never be close drawn round the patient; but only on the side next the light, so as to shade the face; except while there is a current of air between a window and door.

"3. Dirty clothes, utensils, &c. should be frequently changed, immediately immersed in cold water, and washed clean.

"4. All discharges from the patient should be instantly removed. The floor near the patient's bed should be rubbed clean every day with a wet mop or cloth.

"5. The air, in a sick room, has, at the same time, a more infectious quality in some parts than in others. Visiters and attendants should avoid the current of the patient's breath; the air which ascends from his body, especially if the bed-curtains be closed, and the vapour arising from all evacuations. When medical or other duties require a visiter to be placed in these situations of danger, infection may be frequently prevented by a temporary suspension of respiration.

"6. Visiters should not go into an infectious chamber with an empty stomach; and, in doubtful circumstances, on coming out, they should blow from the nose, and spit from the mouth, any infectious poison, which may have been drawn in by the breath, and may adhere to those passages.

"7. Paupers ought to be required to come before magistrates with clean hands, face, and hair, and in their Sunday clothes. There is considerable danger of infection by the near approach of people covered with contagious dirt in a close and small room.—Jan. 23, 1800."

Remark.—These rules of prevention will preserve all the neighbours from contagious fever, and, in most cases, the remainder of the family, after one of them has been attacked. They will enable medical, clerical, and other visiters to perform their important duties with safety to themselves.

By these rules of prevention, Chester has been preserved from typhus for thirty-six years. Though this contagion has been frequently introduced into that city by patients who had been infected in Ireland, and other places, it has never spread among the inhabitants, during this long period of time.

At Manchester, the number of patients ill of fever admitted on the physicians' books during twenty-four months, from September 20, 1793, to May 20, 1796, previous to the establishment of the House of Recovery, was 1056. From July 13, 1796, (less than two months subsequent to the opening of the House of Recovery,) to March 13, 1797, being eight months, the patients ill of fever from the same district were reduced to twenty-five. This wonderful result was accomplished by these rules of prevention, with no other accommodation for patients in fever than ordinary small houses containing twenty-five beds. But in a letter to Dr. Haygarth, dated June 5, 1802, Dr. Thomas Percival, of Manchester, laments "that one thousand and twenty-seven patients had been admitted into the fever wards during the year." He says, "we are proceeding very languidly about the prevention of febrile contagion. Pray take up your pen again to address the public, on the indispensable importance of the preventive plan, by domestic regulations. Houses of Recovery are in truth of subordinate consideration, being only subsidiary aids."

The annual number of deaths by fever in London during the last century was three thousand one hundred and eighty-eight. But by thoroughly cleansing from contagious dirt, the houses of patients admitted into the Fever Hospital established in 1802, in the manner directed by these rules of prevention, the annual deaths by fever in the metropolis were gradually reduced, and in 1811 were only nine hundred and six. These facts are recorded on the high authority of the Bishop of Durham, Mr. Vansittart, and Sir Thomas Bernard. During this period, common small dwellings in Gray's Inn Lane, containing only sixteen beds, called the House of Recovery, received all the patients ill of contagious fevers. From the salutary effects produced by this partial use of the rules of prevention,

it may be judged how much greater would have been the reduction of Fevers, if they had been generally employed, under the direction of active and intelligent inspectors throughout the metropolis.

The Small-Pox Society of Chester, acting on these same principles, prevented this pestilence from spreading in that city, from 1778 to 1784, inclusive. "The experience of the Society for six years has not permitted a doubt that the rules of prevention have been fully adequate to their purpose."

From these and a great many other facts, with inferences deduced from them, published by Dr. Haygarth, in 1775, 1784, 1793, 1801, 1809, 1816, and 1818, which were witnessed by himself, and confirmed by most respectable and intelligent medical witnesses, and never contradicted or disputed, it is proved that any part of the United Kingdom might be preserved from the prevailing contagious fever with ease and certainty by these rules of prevention.

The physicians of the Manchester, Liverpool, Newcastle, and Exeter Infirmities, with a truly philosophical and comprehensive knowledge of the subject, proposed to adopt the separate fever wards of Chester, where, ever since 1783, they have been established with great advantage and perfect safety to other patients. But this intention was unfortunately frustrated, in all these towns, by the vulgar prejudices and opposition of some less scientific members of the profession. Very reluctantly, and after warm controversies which were published*, this plan was forced to be relinquished, and recourse was had to separate Fever Hospitals, (quaintly called Houses of Recovery,) which otherwise would never have existed, being unnecessary where a Hospital or Infirmary is established. In smaller towns and villages no difficulty can be apprehended in pro-

* See "The Proceedings of the Board of Health at Manchester," and "Dr. Clark's Collection of Papers on annexing Fever Wards to the Newcastle and other Infirmaries," which highly merit the attention of Magistrates as well as Physicians.

viding accommodation for fevers, when it is known that the small house in Gray's Inn Lane was sufficient for the Metropolis. In the London Hospitals, and provincial Infirmities, "there might, at no great expense, be wards made in the upper part of the house."—(See Parl. Report, p. 31.)

The success of these measures rests on the complete execution of the rules of prevention, under the direction of an active and zealous inspector, who clearly understands by what laws contagion spreads among mankind. He must be instructed that typhus is never caught out of the patient's room, but by contagious dirt taken out of the room: that typhous miasms never adhere to walls, clothes, &c. so that of course white washing is unnecessary; that it does not spread more in any peculiar constitution of the atmosphere; that it is not generated by crowded dwellings, nor by common dirt, however putrid; but that, like the small-pox, it is propagated by a specific poison, which cleanliness will destroy. Some of the inspectors from their own experience and sagacity will gradually acquire perfect confidence that typhus never spreads but by some transgression of the rules of prevention.

In many circumstances and situations it might frequently happen that contagious patients cannot possibly be moved out of the room inhabited by the rest of the family. It is highly probable that by strict attention to wash every thing clean, and to supply the room with external air, the inmates of the poorest cottage might be preserved from infection. "A pane of glass might be taken from the top of a window, and replaced after all danger had ceased. A paper, attached by a wafer at the four corners might cover as much of the opening as the coldness of the season may require." The proportion of mankind susceptible of infection in close, dirty, and crowded families was found to be twenty-two out of twenty-three. But in many cases a much less proportion suffer, being not exposed to an infectious dose of the poison when placed in houses less close, dirty, and crowded. This consideration suggests a hope that strict attention to the rules of prevention may pre-

serve a much larger proportion, if not all the rest of the family from infection. One patient ill of the confluent small-pox, or scarlet fever, with the malignant ulcerous sore throat, generates above one hundred times more contagious poison, than a whole family ill of typhus.

A physician of scientific knowledge and active habits, with medical assistants, would be best able to execute these preventive measures in a neighbouring district. They would merit, and undoubtedly obtain an adequate reward, for such important services to society.

J. H.

Lambridge-House, April 28, 1819.

It is not generally understood to what kind and degree of danger other parts of the British dominions are exposed from the Typhous Fever which has spread so fatally in Ireland, and in some towns of England and Scotland.

The typhous contagion remains in the body in a *latent* state from about the 10th to the 72d day, reckoning between the time of exposure to the poison and the commencement of the fever. This law of nature I discovered in 1781, from observations on 72 cases. It was fully confirmed by Dr. Bancroft in 1809, from observations on 99 cases. He observed that the *latent* period of *typhous* varied from the 13th to the 68th day. Hence it is manifest that an infected person may travel in perfect health, from and to the remotest part of Ireland and Britain. The increase of fever in Liverpool, Glasgow, London, &c. is thus clearly explained.

A Plan for the Extermination of Infectious Fevers.—Infectious fevers occasion much misery and mortality among mankind: they produce the greatest wretchedness in poor families; but persons in all ranks of life are in some degree exposed to the danger. This fatal pestilence is most destructive in large towns, but it often spreads in country villages for months and even years together. The intelligent and bene-

volent inhabitants of any place may, however, with ease and certainty, preserve their poor neighbours and themselves from infectious fevers and all their calamitous consequences, by forming themselves into a Society, and by providing a commodious house, or wards for the reception of such patients, and by carrying into effect the following REGULATIONS:

"I. Let a reward be given to the person who brings the first information to the society, that an infectious fever has attacked any family; let this reward be increased, if the intelligence be given within three days after the fever first began in the family.

"II. Let the patient, who is ill of the fever, be removed to the hospital on the day when such information is given. He must be carried in a sedan chair of a peculiar colour, to be employed solely for this purpose, with a moveable linen lining, which is always to be taken out and shaken in the fresh air after it has been used, and to be frequently washed: let the sedan be constructed in such a manner, as to lean backward in various degrees, so that the patients may lie in a recumbent, or half recumbent posture, as may best suit their strength. A main purpose of the society will be to remove from the infectious house the *first* patient who is attacked, and as *soon* as possible.

"III. The house, whence the patient is removed to the fever-ward, must be immediately cleansed; and all the dirty clothes, utensils, &c. be immersed in cold water. When the clothes are wrung out of it, they must be exchanged for clean second-hand clothes, as a shirt for a shirt, a sheet for a sheet, &c. to be supplied by the charitable society. Every box, drawer, &c. in the infectious house must be emptied and cleansed:—the floor must be swept clean, and then rubbed with a wet cloth or mop; fresh air must be admitted so as to pass through the chamber between a door and a window;* the

* Might not a leaden casement or other cheap contrivance be fixed in a window of each room, at the expense of the landlord, or society, to supply fresh air, which is most essential for the prevention of infection?

walls must be washed clean where bedaubed with contagious dirt.

"IV. The clothes received from these poor people, wrung out of the cold water, must be again washed in cold water at the storehouse for clothes of the society, and then in soap and warm water; that, when patched and cleaned, they may be again employed.

"V. A medical *inspector* should be appointed to see these *regulations* executed, at a competent salary; together with certain rewards according to the success of his measures:—he should be entitled to a reward of ——— for each family, which has been preserved from infection by his attention, when one in it had been attacked by the fever.

"VI. Each poor family, whose house has been cleansed as here directed (according to a *certificate* from the *inspector* which is to specify *every* circumstance above-mentioned in the 3d regulation) shall be entitled to a reward of ——— : and, if the remainder of the family continue uninfected for six weeks after the first fever-patient has been removed to the hospital, the said family must be entitled to a further reward of ———. The inspector shall give the family a promissory note, or a certificate, for this purpose.

"VII. The inspector must keep a register of infectious fevers, upon the same plan as was executed with success, for six years, by the inspector of the Small Pox Society at Chester:—in which is entered, in separate columns of a table, 1st, the patient's name; 2d, street; 3d, occupation; 4th, when the fever began; 5th, number ill of fever in each family; 6th, date of information; 7th, date of removal; 8th, whence infected; 9th, when washed and aired; 10th, family infected, or preserved; 11th, regulations observed or transgressed.

"VIII. Let a copy of these regulations be printed upon one page, and be placed in every house infected by a fever, and in every house in the neighbourhood, which is in danger of receiving the infection. By such instructions, poor people will be enabled to give timely notice to the society so as to

avert the dreadful calamities which they would otherwise suffer.

"The benefit of these regulations to preserve poor families from all the variety of wretchedness occasioned by infectious fevers, will be exactly in proportion to the spirit and punctuality with which they are executed."

In Chester, as in most large towns, the typhous fever had long prevailed, but was generally confined to the dwellings of the poor. In 1783, it was communicated, and was fatal to some persons of higher rank, which occasioned a general alarm of danger, as all were then manifestly exposed to it. On that occasion I proposed to receive patients ill of *typhous* into *separate* wards of the Chester Infirmary, and to *cleanse their houses from all contagious dirt.* This measure has been accomplished with complete success. In this manner, *typhous* has been exterminated from Chester for 35 years, though frequently, as above explained, brought thither by persons infect-in other places. In October 1817, Dr. Edward Percival visited the fever wards of the Chester Infirmary, where he found only two patients, and one of them was ill of an inflammation of the lungs. He asked whether there were not usually more patients in these wards, and was answered in the *negative.* Many towns have followed the example of Chester, in establishing fever hospitals; but, so far as I know, few or none of them have completely executed the incomparably more important regulations of *cleansing the dwellings of poor patients from contagious dirt.* In towns where even fever hospitals themselves are not kept clean, nor supplied with fresh air, no hope whatever can be entertained that the infectious habitations of the lower orders of people will receive the benefit of the proposed salutary purification. A most intelligent medical friend of mine viewed the fever hospital at Liverpool in October 1817, and found it so close, and smell so offensively, as so express to me *repeatedly,* his apprehensions, that he had, by that visit, exposed himself to much danger of infection. The newspapers have since announced that a physician of this hospital, Dr. Barrow, had caught and died of a

typhous fever. Dr. Corsan, the other physician of this hospital, has since that time, had a fever from which he recovered. In the same town Dr. Goldsmith and Mr. Carter, surgeon apothecary to the dispensary, have lately died of the typhous fever. These events prove how truly and how accurately an estimate of danger from infection, had been formed by my medical friend. In a Dublin hospital, containing many more patients ill of *typhous*, he had for five years attended his daily duty, as a physician, without any injury or apprehension of danger, merely by requiring strict attention to cleanliness and ventilation.

The *rules* and *regulations* above given, do not depend upon conjecture, but on much more convincing evidence than most other kinds of medical and philosophical knowledge. They are founded upon *facts*, observed by myself and confirmed by the testimony of many impartial and intelligent medical witnesses; and upon the uniformity of the *laws* by which contagion spreads among mankind. Upon these *data* calculations are instituted to prove the truth of these practical principles to the high probability of hundreds, indeed many hundreds to one. These facts, and conclusions deduced from them, were published in my "Letter to the late Dr. Thomas Percival, of Manchester, on the prevention of infectious fevers, in 1801." Subsequent facts have occurred to me, which confirm the same doctrine, even to demonstration.

Being fully convinced that these Rules and Regulations might save many lives, and preserve the lower orders of people from great wretchedness, I anxiously request that they may be copied by Editors of Newspapers, and other periodical publications, which, by the general diffusion of knowledge, are become so highly useful and honourable to this age and nation.*

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* We have given insertion to the papers, on fevers and contagion, by the venerable Dr. Haygarth with great pleasure. They are the results of the experience of one who for more than half a century, has devoted himself with singular zeal and success to a subject of the greatest im-

ART. II. CASES *of* OSTEO-SARCOMA.—CASE II.—*In which the left* CAROTID ARTERY *was tied, and a portion of the lower jaw bone removed successfully.* *By* VALENTINE MOTT, M.D. Professor of Surgery in the University of New-York.*

THE subject of this case was a married woman, aged about twenty-two years. She states, that about one year since, there appeared an enlargement of the gum of the left side of the lower jaw, at a point from whence one of the molares teeth had some time before been removed. Very little pain attended the tumour, but it continued to increase gradually. Being at this time pregnant with her second child, and feeling very little pain from the diseased jaw, she took no particular notice of it. After her delivery, which took place about six months since, the swelling of the jaw increased much more rapidly, but the pain remained about the same as at first, with the exception of its being felt occasionally shooting through the part.

The disease is much less extensive than the first case. It reaches from the base of the coronoid process, to the first bicuspis tooth, and extends on each side of the bone to near the base, and includes the posterior angle in the disease. Several of the teeth have been displaced, and those which remain are very much distorted. It has the same appearance and feeling as the first case.

30th March, 12 o'clock.—Assisted by my friends Dr. Post, Dr. Borrowe, and Dr. Anderson, I tied the left carotid artery through an opening of about two inches in length, opposite the thyroid cartilage. So little effect was produced upon her by this, that the other part of the operation was proceeded to immediately.

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portance, and which at the present time claims the peculiar attention of our magistracy; in as much as our state Legislature have recently made provisions for the establishment of a Fever Institution in the vicinity of this city.—*Ed.*

* For Case I. see No. 4, vol i. of this Journal.

An incision was now made, as in the former case, beginning over the condyloid process above the meatus auditorius, and carried in a semicircular direction below the base of the jaw, terminating upon the chin, a little under the lip. The flap of the cheek being dissected up, the first bicuspis tooth was extracted to prepare the way for the saw. This instrument was now applied, and the bone divided in a perpendicular direction from that situation. The masseter muscle was then separated from the angle of the jaw, and the parotid gland carefully elevated anteriorly, so as to lay bare the bone a little above the angle, in order to make room for the saw, midway between the processes and angle of the bone, at which situation it was divided in a direction parallel to the zygomatic arch.

The bone was now raised at the chin by the finger and thumb, and detached from the parts within the mouth by a scalpel, until the diseased mass was completely removed.

During the elevation of the flap and removal of the bone, the hemorrhage was profuse. At least half a dozen ligatures were applied, some of the divided arteries bleeding equally free from both their extremities.

It will be observed in the first case, that only three ligatures were required during the removal of the tumour, and it is to be remarked, that the carotid artery in that instance was taken up the day previous. Is the circumstance of the carotid artery being tied immediately before the remainder of the operation, as in the present case, sufficient to explain the excess of hemorrhage?

This patient bore the operation with much firmness. The flaps of integuments were brought together by several interrupted sutures and adhesive straps, and the proper bandages applied.

Seven o'clock, P. M.—Pulse eighty-eight; nods that she is comfortable; slept fifteen minutes, and is refreshed; sick at stomach, and an effort to vomit; ordered not to speak.

10. P. M.—Has coughed once, and a discharge of fresh blood from the mouth and from the wounds, so as to come

through the bandage and run upon the neck: it stopped directly; it all came from the upper wound; pulse eight-eight; has taken a little cold water by the tea spoonful.

31st. 10 A. M.—Had a good night; coughed hard several times; no more bleeding; feels much refreshed from her sleep; pulse ninety-two; skin natural; took ten drops of tinct. opii to quiet the cough, but the nausea being increased, it was not repeated. Directed her to have cold barley water by the tea spoonful instead of cold water; enjoined her to be very quiet.

April 1st.—Cough bad; in the night much disturbed; pulse ninety-two; ordered enema communis, which did not operate, and was repeated in the afternoon with good effect.

5 P. M.—Pulse one hundred and twenty to one hundred and thirty-five; speaks indistincly to-day; ordered a cough mixture.

2d.—More comfortable; good night; pulse eighty-eight; all symptoms more favourable; no tumefaction about the eyelids of either eye; cough less; ordered tinct. opii &c. as expectorant; was out of bed a short time.

3d.—Passed a more comfortable night, and feels refreshed this morning; countenance good; no tumefaction of the face; articulates distinctly; pulse eighty-eight; says she feels very hungry.

8 P. M.—Doing very well; pulse eighty; cough had been very troublesome in the morning; expectorant mixture to be continued.

4th.—Says, with a distinct and audible voice, that she is better than at any time before; has no pain in the wounds; cough less; from the state of the bandages, they were all removed, and the wounds cleansed and dressed; wounds all look well; pulse about ninety-two; directed some thin broth; is hungry.

5th.—Is much more comfortable than at any time before; passed a much better night; took some chicken tea with much relish; no appearance of tumefaction of the countenance; pulse one hundred and four: had an enema this morning which operated well; cough much relieved.

6th.—Dressed the wounds, and removed from the upper the sutures and all the ligatures but one; it looks very well; the lower wound appears very well; but little union by adhesion has taken place, probably in consequence of the violent cough with which she has been distressed; pulse about eighty; she smiles and speaks distinctly, and says she is very hungry; directed her to have good chicken soup and panada.

7th.—Has been sitting up in bed for some time, and says she is very well; pulse ninety-two; ordered some sulphate of soda in divided doses, until it shall operate.

8th.—Appears to improve daily; has been sitting up in an easy chair a short time; directed her to use great care in moving from the bed to the chair; to avoid any moving of the head or neck; wounds are doing very well; removed the last ligatures from the upper wound in the dressing of it to-day; pulse one hundred and twenty; the increase of frequency is probably owing to the operation of the salts, which has just taken place.

10th.—Discharge from the wounds much less; they are rapidly healing; pulse one hundred and four; takes freely of soups and panada; says she feels very hungry; permitted her to sit up a little while, several times to-day.

11th.—Dressed the wounds; they are doing well; pulse one hundred and four; bowels have been moved naturally; continues the spirits and water to the mouth, and it has already corrected the fœtor very much.

12th.—On dressing the wound this morning, the ligature from the carotid came away; the most favourable report in other respects can be made; pulse one hundred and four.

13th.—Says she feels this morning as well as ever; wounds doing well.

14th.—Passed the day comfortably.

15th.—The fœtor and disagreeable taste in the mouth very much gone off, with the use of the spirits and water lotion; in all respects doing well; permitted the babe to nurse a little to-day, for the first time since the operation.

16th.—Wounds are almost closed; sits up most of the day; says she feels perfectly well; continues to nurse the child.

17th.—No unpleasant taste in the mouth or fœtor to be observed, from which it appears that the wound has completely healed within; wishes to know when she may go down stairs; continue to dress the wounds every day with dry lint and adhesive plaster to retain it; directed her to have liberally of nourishing diet, as milk, puddings, soups, and the soft part of oysters.

18th.—Says she has no complaint to make.

20th.—Wounds just healed; dressed with dry lint; walks about the room, and has been down stairs.

22d.—Continues to improve in all respects; permitted her to chew some animal food with the other side of the jaw, as she thinks there is no difficulty in using it.

24th.—Continues to improve.

28th.—Wound of the jaw at a small point about the middle has suppurated, and upon close examination discovered a short ligature as the cause. Wound of the neck has suddenly enlarged a little, in consequence of the cicatrization being more rapid than the granulations from below, and thus a small cavity was left underneath.

30th.—Wound of the jaw healed since the ligature was removed; the other wound is doing very well.

May 1st.—Walks out, and seems to be in health perfectly well. Wound of the neck nearly healed.

4th.—Makes no complaint.

6th.—Leaves town to-day.

25 Park Place, June 1, 1828.

Art. III. Observations *on* Chronic Vomiting. By James M'Naughton, M. D. Professor of Anatomy and Physiology in the University of the state of New-York.

A prava concoctione ciborum innumera oriuntur, mala neque levia, neque sanatu facilia.—Gregory.

The function of digestion is one of the first importance in the animal economy. On its proper performance, in a great measure depends the healthy condition of the rest of the system. It is a function very liable to derangement. If we consider the number of organs concerned in the process, the delicacy of their structure, and the extensive sympathies of some of them, we need not be surprised that it should be so often depraved.

Of the numerous evils arising from bad digestion, Chronic Vomiting is one of the most troublesome. It is a complaint of no unfrequent occurrence, and one that has often proved fatal. It is, therefore, a remarkable circumstance, that it has received so little attention from practical writers. In the generality of works on the practice of medicine, it is either omitted altogether, or mentioned in so slight a manner, that the physician can hardly gather from them enough to guide him in the treatment of the malady.

Vomiting is produced by causes almost innumerable; some of which have their seat in the stomach itself, and others in very remote parts of the body, which affect the stomach according to the laws of sympathy. Among the most frequent may be enumerated,—food of improper quality, or *proper food in too great a quantity;* acrid substances swallowed or generated in the stomach; inflammation of the stomach or of the neighbouring organs; diseases of the liver, pancreas, spleen, and duodenum; obstruction of the pylorus and intestinal canal; diseases of the kidneys, uterus, and head; fevers, repelled gout, severe pain, passions of the mind, &c. &c. Any one of these may excite vomiting, but it may afterwards continue from debility of the stomach alone, long after the exciting cause has been removed.

When a vomiting has become habitual, it is usual to attribute it to some organic disease of the stomach, or of one of the organs with which it is intimately connected. Such an opinion is no doubt often well-founded. However, I am inclined to think that vomiting, even of several years standing, is, more frequently than is supposed, owing to simple derangement of function, either of the stomach, or of one or more of the organs associated with it in the process of digestion; and that the organic changes observed after death from vomiting, ought, very often, to be considered effects of that complaint, and not its causes.

What can with more probability excite disease of the chylopoietic viscera and chest, than the violent straining and consequent congestions, accompanying frequent and severe vomiting?

It is frequently very evident that the vomiting cannot be connected with organic disease; for it often commences after taking a severe emetic, or in the course of some acute disease, in which the existence of organic change could not be suspected. If then, such changes be consequent upon vomiting, may we not, with great propriety, believe, that many of them are its effects? Such a cause is certainly adequate to produce such effects.

In the several cases mentioned in Morgagni's 30th epistle, the organic diseases were chiefly confined to the chylopoietic viscera and chest. The liver and pancreas were more particularly the seats of disorder. Morgagni ascribes the vomiting in these latter cases, not so much to the direct sympathy between the stomach and these organs, as to the injury which the process of digestion sustained from the want of their cooperation. The aid of a certain quantity of bile and pancreatic juice, we have reason to think, is absolutely necessary for perfect digestion. If then, the liver or pancreas be diseased, the secretions must be imperfect; and digestion, therefore, will be deranged in proportion to the deviation from the natural condition. The relations of the chylopoietic viscera are so intimate, that disease cannot exist in one without in some degree

affecting all the rest. Each organ has a certain duty to perform, and if it fail in its office, the process of digestion, deprived of the co-operation of the whole, becomes depraved: hence vomiting and a long train of evils.

The long continuance of vomiting is injurious in many ways; it renders the stomach weak and irritable; excites diseases of neighbouring organs, or aggravates those already existing; disturbs digestion and nutrition; and, consequently, debilitates and exhausts the whole system. It is therefore desirable in all cases of long standing to put a stop to it.

In those cases in which the vomiting is the primary disease, and depending upon mere derangement of function, I think it can be almost always cured; and in the instances in which incurable organic changes have taken place, it can be much relieved, the patient's suffering lessened, and his life protracted.

In the cure of this complaint the indications, in my opinion, are, first, to check the vomiting; second, to restore the peristaltic action of the intestines; and, third, to restore the tone of the stomach and bowels. The first is to be fulfilled by the application of an epispastic to the pit of the stomach, and confining the patient to a very limited allowance of food and drink; the second, by the use of purgative clysters and cathartics; and the third by tonics, fresh air, exercise, &c. When there are obstructions of particular organs, suitable remedies must be used for their removal, in addition to those employed for removing the vomiting.

The utility of epispastics in checking vomiting, whether acute or chronic, has been long known and acknowledged. I consider the due regulation of diet in all cases of chronic vomiting, of the very first importance. When the appetite, as is usually the case, is greater than natural, it is impossible by any mode of treatment to do good, without preventing its indulgence. Nature clearly points out the propriety of such a restraint. There are cases on record, in which every thing taken had been apparently vomited for years, without serious injury to the health. Heberden mentions the case of a wo-

man, who told him, that she had vomited every thing she had taken for thirty years. It is manifest, that in all such instances, some portion of the food must have remained in the stomach, and been digested. If in such cases the stomach was capable of retaining a certain quantity of food without inconvenience, does not the circumstance teach us the propriety of confining patients to a spare diet, in all cases of chronic vomiting?

The stomach can perform a certain quantity of labour without inconvenience; but if its duty be very much increased, it becomes fatigued, and irregular action is the consequence. When three or four times as much food is taken as the stomach is capable of acting upon properly, it becomes oppressed, and nausea and vomiting are the consequences; "Sapiens natura onus recusat, quale neque concoquere potuisset, neque impune ferre."

The keeping of the bowels regular, I consider next in importance to the regulation of the diet. Dr. Hamilton, in his excellent work on purgative medicines, has demonstrated the utility of cathartics, not only in removing, but in preventing a peculiar kind of vomiting, incident to women at a particular period of life. I consider them equally useful in other species of the complaint.

The propriety of the third indication is so evident, that it is unnecessary to make any remarks respecting it in this place.

Out of several cases of chronic vomiting, which I have treated agreeably to these views, I shall detail only two of the most inveterate, and leave the reader to judge of the correctness of the principles, from the result of the practice.

Case I.—On the 10th of February, 1819, I was called to see a young lady, who had been for a long time troubled with vomiting. She had been under the care of a number of eminent practitioners in several parts of the state, without receiving any benefit; she had also exhausted the whole catalogue of popular remedies, with as little advantage. For several years the complaint had been allowed to take pretty much its own course, as it was thought that medicine could do nothing,

either to remove or to relieve it. At the urgent request of a relation of the family I was requested to visit her.

I found her very weak and much emaciated. Her pulse was feeble, and about 98 in a minute; her tongue clean, and bowels very costive; she had for several weeks been troubled with severe spasms. There was pain of the left shoulder, and she complained when pressure was made over the pit of the stomach, or over the cartilages of the ribs of the left side. The stomach was so irritable, that every thing taken was vomited almost immediately. Her appetite was ravenous, and the most hearty food was craved. She "could eat," to use the language of her mother, "as much as the whole family," consisting of eight members.

The appetite was not even satisfied, when she was compelled to leave the table and throw off what she had taken. She could immediately return to her repast with as much zest as ever, and was again obliged to vomit as before. There was nothing peculiar in the appearance of the matter thrown up; it was merely what she had eaten, in a very acid state. She told me that the acidity was sometimes so great as "to set her teeth on edge."

Inquiring into the history of the case, I was informed, that about eight years before she had a fever, from which she had a slow recovery; that during her convalescence she took an emetic, which operated severely; and that from that time she continued to be more or less troubled with vomiting. The stomach by degrees became more and more irritable, until at length every article, whether solid or fluid, was rejected. At first the health did not suffer much under the complaint; she preserved her flesh and wonted good spirits. Of late, however, she had lost rapidly both flesh and strength, and appeared to be fast approaching to the end of her sufferings.

It was not to be expected, under such circumstances, that much encouragement could be given to the patient. I endeavoured to ascertain the kinds of treatment the physicians, under whose care she had been placed, had pursued. It appeared that the vomiting had been considered as symptomatic

of some organic affection of the liver, or spleen; and that the remedies used had been chiefly directed to the removal of some obstruction in one or both of these organs. I examined the hypochondria, but could not discover any enlargement or induration of the liver or spleen. On the left side, under the cartilages of the seventh and eighth ribs, she complained of pain on pressure; and I thought there was some enlargement of the left lobe of the liver; but as there was little or no induration, I could not ascertain the fact to a certainty.

As the treatment that had been pursued in this case had not been particularly directed to the vomiting; as the existence of serious organic disease was uncertain; and as the matter vomited had never been very unnatural, I had some hopes of effecting a cure, and expressed my opinion to the patient.

She lived several miles from town, and her friends thought her too weak to be carried to Albany. I however declined doing any thing for her, unless she was put immediately under my inspection. It was therefore agreed upon, that she should be brought in as soon as the weather would permit. Accordingly, on the 15th of February she came to town.

As soon as she had sufficiently rested after the journey, I applied a large epispastic to the pit of the stomach, and over the cartilages of the left side, to excite counter irritation; and as there had been no evacuation from the bowels for more than a fortnight, I directed an enema of infusum senna ℥ viii, magnesiæ sulphatis ℥ iſs, to be given.

Feb. 17th. I called in the morning, and learned that the epispastic had drawn well, and that the enema had operated once. She had vomited the preceding evening after drinking tea. I directed that she should eat no breakfast, and that for the present, as she was to take medicine, she should be allowed nothing but a table-spoonful of spiced barley water every hour. I directed two of the pilulæ aloes cum colocynthide, of the Edinburgh Pharmacopeia, to be taken every two hours, until they operated as a cathartic. The blistered surface was dressed with stimulating ointment, and the purgative enema above mentioned, repeated every three hours. I called in se-

veral times during the day to ascertain the effects of the remedies. The cathartic, although given in divided doses, caused considerable uneasiness at the stomach, but no vomiting. The clysters operated tolerably well. She complained much of hunger, and it required my authority, as well as the entreaties of the nurse, to prevent her indulging her appetite. In the evening, after eight of the pills had been taken, the cathartic began to operate, and produced four or five evacuations. The stools were very costive, but in other respects had nothing very unnatural in their appearance. She felt very weak.

18th. I found her comfortable, but weak. She had slept well during the night. As she was troubled so much with acidity, I directed her to live entirely on animal food, and gave her particular charges to take but a small quantity at a time. The quantity at first did not exceed half an ounce every two hours. I requested her to eat slowly, and to chew her food very carefully, for the purpose of having it well imbued with saliva, and of rendering it more readily soluble in the gastric juice. The drink was brandy and water, in the quantity of a mouthful at a time. She complained bitterly throughout the day of her hard fare, and begged a more liberal allowance; but without effect. She suffered considerable pain from acidity and flatulency: I prescribed a few grains of the oxide of bismuth, to be taken every three hours for the relief of these symptoms.

For the four following days the same diet was continued. Six grains of the oxide of bismuth, made into a pill with some mucilage and ginger, were taken every three hours, and the bowels were kept open by purgative clysters, mornings and evenings.

When once the bowels were freely evacuated, and the diet properly regulated, the inordinate appetite subsided, and the vomiting ceased to return. On the 23d, as the irritability of the stomach had so much lessened, I prescribed a dose of the pulvis jalapæ compositus; which operated freely as a cathartic, without once producing vomiting. The clysters were now discontinued. The pulvis jalapæ compositus was repeat-

ed on the 25th and 28th, and the oxide of bismuth on the intermediate days. The blistered surface was now allowed to heal, and the diet made a little more liberal. The breakfast consisted of a small dish of coffee, toast, and some meat. During the day she was confined to animal food and brandy and water; and as she had become tired of the former, and most cordially detested the latter, there was no great danger of her taking too much of either. During the rest of her stay in Albany, the same regimen was continued. The bowels were kept open, by taking at bed-time as often as necessary a few of the compound rhubarb pills, and an infusion of gentian was substituted for the bismuth, except when there was pain at the stomach, when the latter was preferred.

She was now permitted to go out. Her health and strength rapidly returned, so that at the end of the third week she considered herself well, and asked permission to return home. Being afraid that if she did return, she would not follow as strictly as was necessary the course recommended to her, I advised her to remain a few weeks longer, until I thought she might go with safety. She accordingly remained until the first of April, when she returned in perfect health.

Since then she has enjoyed perfect health, and has never been troubled with her old complaint. In this case, whenever the patient took a little too much food, or allowed her bowels to become costive, she was threatened with a return of the vomiting; but these feelings were speedily removed by a cathartic and spare diet.

Case II.—In April, 1819, Isaac Clark, of the city of Schenectady, consulted me on account of a vomiting, which had troubled him for three years. Several remedies had been tried, without any advantage. Some person acquainted with the former case, advised him to put himself under my care. Accordingly, on the 19th of April he came to Albany, and took lodgings with that intention.

He was about 35 years of age, tall, and rather slender. He complained much of weakness, had a slight fever, and by his account had lost much of his wonted flesh. There was a con-

stant pain at the pit of his stomach, rather towards the right side; and the pain was very much increased an hour or two after eating, when he was in the habit of vomiting. The distress was always much relieved by the discharge. Upon making pressure over the pyloric orifice of the stomach, he manifested some uneasiness, and I thought there was some hardness. Fearful of an incipient scirrhus, I gave a cautious prognosis. He was, however, very anxious that I should try to relieve him.

A large epispastic was applied over the pit of his stomach, and as soon as that began to take effect, he took six of the pilulæ aloes cum colocynthide, and had directions to take three more at the expiration of five hours, should the first dose have no effect. The first portion was sufficient; it operated freely without once inducing vomiting. Being much troubled with acidity, he was directed to live entirely on animal food, and sea biscuit, taken in small quantities at a time, as in the former case. Since the irritability of the stomach was not so great as in that instance, the quantity allowed at each time, was not quite so small; but it was not one quarter of what he wanted. The drink was brandy and water, or soda water, as might be preferred. The evacuations from the bowels being unnatural, the cathartic was repeated on the 20th and 21st, and, on both occasions, operated well. No vomiting took place. The patient now declared that he had not felt so well in two years, and began to manifest some anxiety to return to his family, urging as an excuse, that business rendered it absolutely necessary. With much difficulty he was prevailed upon to remain until the 26th, when he said he must go; but promising at the same time to be back in a day or two. From the 21st to the 26th, no medicine was given, except some magnesia to keep the bowels regular. The animal diet was continued, and he drank freely of the soda water. Before going away he was strictly charged to adhere to the regimen he had been put upon, and to keep his bowels regular.

On the 28th he returned, not so well as when he went away. I was called to see him at 10 o'clock, A. M. and found him

in great distress, rolling about the bed, and complaining of violent pain of the stomach and bowels. I was suspicious that, while absent, he had indulged his appetite too much, and that from that cause arose his present agony. A spiritous fomentation was directed to be applied to his bowels, and a common enema given; but before either of these could be got ready, he vomited, and threw off more than *half a gallon* of half digested food, in a highly acid state, which gave him instant relief.

His bowels were again freely purged by means of the pilulæ aloes cum colocynthide, and the same diet before made use of, continued. Half an ounce of infusion of gentian was given three times a day, to restore the tone of his stomach, and the bowels were kept regular. There was no return of vomiting after the 28th of April. He remained until the third of May, when he again became impatient, and wished for permission to return home; promising that he would pursue the course recommended to him with the most scrupulous exactness, and that he would come twice a week to town to satisfy me of the correctness of his conduct.

He was again requested to pay particular attention to his diet, and to keep his bowels regular. He was also directed to take an ounce of infusion of gentian three times a day. I saw him three or four times after this, and had a favourable report of his health. Since then I have neither seen nor heard of him.

It is probable, that he has had some returns of vomiting, as he exercised so little control over his appetite. I am, however, well satisfied, that with moderate care, he might entirely recover. Whenever his diet was properly regulated, he did not complain of the heat and pain of the pylorus; but whenever he indulged himself too much these were greatly aggravated. Had he continued to gratify his appetite much longer, it is probable that incurable disease of the pylorus, and ultimately, death, would have been the consequences.

In these two cases the effect of the practice could not be doubted. The bitter sarcasm, "Natura curat morbos acutos,

tempus que chronicos," which has been often applied to our art, could not be applied to either of them. In both, nature and time had a fair opportunity of exerting their healing powers, but without advantage. In the first case, nature was nearly exhausted, and it did not appear that life could be much longer protracted, if remedies were not used. The vomiting, in both instances, was checked the first day of the treatment. In the first it never returned; in the second it returned, whenever the patient deviated from the prescribed regimen, and was again removed when he pursued the proper course.

It is foreign to the object of this essay to enter upon the consideration of the various diseases, with which vomiting may be connected. The general plan of treatment recommended in this paper, I think, may be pursued with advantage, from whatever cause it may proceed. And as vomiting is in various ways so injurious, it is desirable in all cases of long standing to check it. The course herein advised, may be followed for that purpose, while suitable remedies may at the same time be used for the removal of any co-existing malady.

Albany, May 30, 1823.

ART. IV. ON *the prevalence of* TYPHUS FEVER *in tropical climates.* By DANIEL L. M. PEIXOTTO, M. D. of New-York.

IN a former paper* I had occasion to record the occurrence, in an Island not farther removed than twelve degrees from the equator, of a fever, which, in its origin, its symptoms, and in the method of treatment found the most successful for its cure, possessed all the prominent features of genuine typhus. Armed thus with experience, I could not withhold my expres-

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* Observations on Curacao in the New-York Medical and Physical Journal, vol. i. p. 409.

sion of dissent from the opinion of those writers, who have maintained, that heat extinguishes this fever, and that it accordingly never prevails except during cold weather, giving it, by consequence, an exclusive locale in northern latitudes. This opinion is the more unfortunate and untenable, as it is at direct variance with facts resting on testimony the most ample and conclusive, and furnished not only by physicians who have witnessed the occurrence of typhus fever in the tropics, but also by those who have seen it prevail during the hot seasons of temperate latitudes.* All analogy is moreover against it. Fevers, whether contagious or not contagious, are generally increased and rendered more fatal under the operation of high degrees of atmospheric temperature, as plague, yellow fever; the progress of which diseases is, on the contrary, arrested by frost. Independently of analogy too, we have the authority of Willan, and there are not wanting facts in the experience of this country, to confirm the statement that typhus itself is stayed by the approach of intense cold weather.

It is my intention, in this essay, without making a direct appeal to the facts in my possession, which incontestibly prove that typhus is equally native in the torrid, and in the temperate zones, to consider the objections that have been started on this point, and in this manner place the general arguments in favour of the side of the question which I believe to be the correct one, in most prominent relief. These objections may be comprised under two heads: first, that the fevers which occur in the tropics, and which are mistaken for typhus, are fevers of a low malignant type, acquiring indeed, according to some, a typhoid tendency; but by others again, denied all similarity of character with the disease with which they are said to be confounded: secondly, that cold is indispensable in the production and propagation of typhus contagion. I shall consider each of these heads separately, and I hope to prove

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* Sydenham on the rise of a new fever. Hamilton on purgatives; and for many other authorities, see Medical Recorder, vol. 4. p. 326. 785.

satisfactorily that, under each, there has much error been indulged both in point of speculation and in matter of fact, by those who restrict the appearance of typhus to cold climates.

And, in the first place, it is contended, that the tropical fevers adduced as examples of typhus, are slow nervous fevers, of a low and asthenic character, and wanting the specific qualities of typhus. I shall not pause to comment on the uncourteousness and petitio principii of an argument, that claims a confidence in the speculative opinions of distant judges, which it denies to the perceptions of near observers. Such arguments cannot however be sufficiently reprehended. They are calculated to introduce confusion and endless skepticism in medical discussions, and are not less injurious to the party which uses them than to that against which they are directed; for they are at the employ of both, and will serve the dexterous rather than the just.

There is a position assumed by this objection which requires to be substantiated before the objection can be admitted to have any weight. It is, that low asthenic symptoms are not appropriate to typhus. How far this position is from being correct, it is scarcely necessary to suggest to the most ordinary observer; to one who has been accustomed to look up to Huxham and Pringle for accurate and masterly delineations of typhus, it will appear not a little bold and novel. Nay, Cullen, whose definition has served to a certain degree as the groundwork of argument to this very objection,* makes typhus expressly a disease of an asthenic character—"vires multum imminutæ." I am aware that objections have been made, and justly, to the definition given by Dr. Cullen of typhus on this very score, because it includes one variety only of the disease, which has been shown to have others even of an opposite nature; nay, I am fully convinced that all fevers are, at their onset, attended either with increased or oppressed action. But it would be the height of error to go to an opposite

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* Bancroft, part v. chap. 1st. page 337.

extreme, and deny that typhus is ever asthenic or attended with low action, inasmuch as it frequently happens that the stage of excitement or that of oppression is so short, and that of collapse so immediately supervenes, as to mask the true character of the disease. That this may frequently be the case with tropical typhus, I will not attempt to deny; but this would no more prove that it was not typhus, than that similar forms of typhus, occurring in northern latitudes, were to be excluded from the same class. I may here take notice of a circumstance that has tended very much to disguise the true nature of these forms of typhus fever in all countries. "Unfortunately," says the classical Armstrong, "the early periods of such disorders have been greatly neglected by many authors of eminence, while their attention has been closely directed to the phenomena of the advanced stages, which are invariably nothing more than the results of the morbid action of the first. This has been," continues he, "and is still one great source of error, both in speculation and practice." When we come to speak of the treatment, we shall find these remarks more fully illustrated, and that the similarity between the tropical and northern typhus holds no less good in their history than in their type.

The error, it appears to me, lies in this, that a generic difference has been attempted to be established, where, if any distinction be indeed allowable, there is no more than a difference of variety. The division of typhus into its several varieties has been overlooked, and from this has arisen much of the present dispute. Indeed, Dr. Cullen fell into this error, when he made two distinct genera of synochus and typhus, and he was aware of it himself,* for in his notes to his defi-

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* The distinguished Professor of the Theory and Practice of Physic in the College of Physicians and Surgeons in the University of New-York, animadverts in just terms upon this error of Cullen, to whose talents he never fails at the same time to pay a just tribute. In his valuable work on Nosology, Dr. Hosack has accordingly blended the two genera into one.

nition of synochus, with a candour seldom imitated, he expresses his doubts whether there is any ground of distinction between this genus and typhus. "Inter typhum tamen et synochum limites accuratos non ponere possum; et an revera pro diversis generibus habenda, vel positis diversis, utri eorum synonyma auctorum referenda sunt, *dubito*."* The modesty of Cullen was commensurate with the extent of his knowledge and the brilliancy of his genius, and like these latter qualities it is as rare.

If it can then be made to appear that the tropical fevers in dispute belong to any one of the varieties of typhus, even allowing, for the sake of argument, that owing to the effects of climate, or the habits of the people, or to improper treatment, they are chiefly of one variety alone, the question cannot long remain undecided. The only legitimate and conclusive test by which to prove their identity with typhus, is to show that they invariably possess the pathognomonic symptoms which characterize that genus of fever. This I shall now attempt to do. And if it can be shown that they also require similar modes of treatment, there will scarcely remain the shadow of a doubt in the minds of the most skeptical or prejudiced.

The pathognomonic symptoms of typhus are considered, by the highest authorities of the present day, to consist in a disturbance of the sensorial functions, and a prostration of the moving powers, always present in every stage and variety of the fever, under whatever form it may appear, simple, inflammatory, or congestive.† Bancroft, and others, among whom Armstrong‡ formerly was prominent, constituted a specific

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* Synopsis Nosologiæ Methodicæ, v. 2, p. 79. Edinburgi, 1780.

† Armstrong and other authors on Typhus.

‡ This able author has lately recanted his opinions on Typhus with a liberality and candour which may be ridiculed by dogmatists, but which are not the less evidences of a mind confident of its own powers, and not to be checked in its course by motives of ordinary prudence and pertinacity. Let every medical inquirer consider whether, as was the

contagion as the only true diagnostic mark of typhus: but this would be no more an infallible test in speculation, than a safe one at the bedside of a patient. Its existence it is impossible always to ascertain; it has been denied altogether, even by those who at first strenuously contended in its behalf; and, what is more to the point, if we make proper allowance for a difference of circumstances resulting from climate, it is with as much reason to be claimed, and is actually claimed, as a characteristic of the tropical as the northern typhus. I waive the consideration of it, therefore, till I come to treat of the second objection.

I shall take for the subject of comparison, not fevers described under the express name of typhus, but those which the writers have designated under the name of slow nervous fevers, or under any other appellation. Hillary, in his standard work on the diseases of Barbadoes, an island situated in lat. 13° N. describes a slow nervous fever in the following words:

"About the middle of February, a slow continued nervous fever seized some few patients; it usually came on with a slight *chilliness, or a gentle rigour, and uncertain flushing heats, a loss of appetite, nausea, and sometimes a retching to vomit, a lassitude and listlessness, with dejection and anxiety, a giddiness with pain in the head and back;* an exacerbation of all these symptoms, with a low, quick pulse, generally towards the evening. This usually continued for five or six days, without the patient's being quite cast down, or his being willing to be confined to his bed or chamber, in this warm climate, in hopes of getting the better of it; but the rigour returning, and the fever and its symptoms increasing, at last obliged them to it."* It will be seen that this is evidently the first stage of oppression, marked by every symptom which usually characterizes genuine typhus. For confirmation, let us turn to Arm-

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case with this celebrated author, "the strong prejudices of education, and his own inherent pride, do not prevent him from investigating the primary source of a disease with that simplicity and purity of mind which the science of medicine requires."

* Hillary, p. 80.

strong. That author thus describes this first stage:—" The stage of oppression is usually marked by a variety of symptoms, among which the following are most conspicuous. Paleness of the face; *a peculiar look of dejection and weariness;* some degree of darkness or livor in the integuments surrounding the eyes; *prostration of strength; diminution of mental energy and of sensibility; cold creeping sensations on the surface, or short, hot, and chilly fits alternately; loathing of food, nausea or vomiting,* whitish and clammy tongue; sense of weight or anxiety about the præcordia; occasional sighing and hurried breathing; *aching, heaviness, or giddiness* of *the head;* coldness of the back, and *pain of the loins; a quick, low, struggling pulse, changeable as to frequency, and even irregular as to force.* The stage above described sometimes comes on and reveals itself with rapidity; but *generally it is more insidious in its approaches,*" &c.*

We now return to Hillary, who thus goes on in his description of the second stage: " The pain in the head and giddiness increased, with a torpor or sense of weight and coldness in the occiput, and along the coronary suture, accompanied with a great lassitude and watching, or if they did sleep, they were neither refreshed by it, nor sensible that they did sleep; their urine was pale and always without a sediment, as usual in most fevers in this climate;† the pulse was usually low, but quick, and often unequal or irregular; the giddiness and pain of the head increased much, and they were often delirious for a few hours, and then sensible again, and it returned again in the same manner; and sometimes a tinnitus aurium came on, after which a deafness and a delirium; the tongue was sometimes dry, though often moist, but white and a little brown in the middle, but rarely any complaint of thirst; a great faintness, and sometimes a deliquium animi, especially if they sat up too long, though in the bed; cold partial sweats came on, especially on the face, neck, and the back of the hands, and

* Armstrong on Typhus, p. 20.

† I have seen many exceptions to this, both in Curacao and on the Main.

sometimes about the præcordia. Some had a few loose stools, but they were so far from having relief from them, that the dejection and weakness was increased by them; the deliriums were not great, but often returned, and sometimes were rather a confusion of action and incoherency of words, with a dozing and muttering to themselves; and they sometimes deposited their urine and excrements without being sensible of it. When the delirium increased, the extremities generally grew cold, and their nails livid, and the pulse became very quick, small, weak, and irregular; and then they swallowed their food with a difficult gulping, and these were soon followed with great tremors, twitchings, and catchings, a subsultum tendinum, and the delirium either soon turned to a profound coma, or convulsions came on, which soon snapped the thread of life. But, on the contrary, if the sweats were brought to be equal all over the body, and warm, and copious, or if plentiful spitting came on, and the pulse became fuller, softer, and freer, and vibrated with more liberty, and all the symptoms changed for the better, the fever generally ended by a large, critical, copious, warm sweat on the nineteenth day."* I think it unnecessary to apologize for the length of an extract which conveys so full and precise an idea of the nature of the fever, and which cannot leave any doubt on the mind of an unprejudiced reader as to its true character. To quote the parallel description of the train of symptoms in typhus, as it appears in northern countries, would be superfluous. The constant presence of the diagnostic symptoms which characterize the latter will be observed to attend the disease described by Hillary. The brain and nervous system are undeniably the primary seat of disease in both, and it is the morbid condition of these organs and the derangement of their functions, that we recognise as the prominent features of the primary stage of oppression, as well as of the subsequent partial reaction and final collapse. The depression of the moving powers, and the burthened con-

* The duration of the disease, it will be observed, is similar with that which obtains in the descriptions of Armstrong, &c.

dition of the arterial system, are markedly pointed out in all the leading symptoms from the commencement to the close of the fever, and tend further to designate its peculiar and infallible physiognomy. It would have been matter of congratulation, if the West India physicians enjoyed better opportunities of examining, in fatal cases, the changes induced by disease previous to death. But I know, from experience, the difficulties which lie in the way of such desirable means of information, partly on account of the extremely rapid putrefaction that takes place in warm latitudes, and not least on account of the unyielding prejudices and jealous watchfulness of the inhabitants. Before closing with the account of this author, I must call in his own unprejudiced opinion in favour of the view which I have taken of this slow nervous fever. Speaking of the same disease, as it occurred in another month, he says, "The fever put on and appeared in this warm climate with all the same symptoms as it usually does in England, and as they are accurately described by that learned and able physician, Dr. Huxham, in the *cooler* climate of Plymouth."*

There is another symptom, however, on which Armstrong more particularly insists in his diagnosis between common continued and low fevers, and typhus fever, as proper to the latter alone. "In the common continued fever, the skin is of a brighter red than natural, especially on the cheeks; on the contrary, the skin is always more or less of a dusky colour in typhus, and *an admixture of it may be best observed in the flush of the face.* This duskiness of the skin is one of the proper symptoms of typhus. So very characteristic is this cutaneous duskiness," continues Armstrong, "that I think I could distinguish duskiness by it at any time."† Jackson, than whom no physician ever possessed more enlightened views of his profession, or enjoyed and improved more extensive opportunities of observation, in his account of the malignant fevers of Jamaica, after describing the ordinary symptoms which will

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* Hillary, p. 43.

† Armstrong on Typhus, p. 261.

not be wanting in the diagnostic characters already referred to, proceeds to notice those which are more characteristic of these fevers. "The state of the eye and countenance affords the surest signs of the malignity of the disease; but there is difficulty in discriminating those appearances. The face is not unusually flushed in fevers; but in the present case *the countenance exhibits nothing else besides an appearance of simple flushing*. It is given *dark* and overcast,"* &c.

Here we see already the three diagnostic characters, chiefly relied on by northern writers as peculiar to typhus, present in the West India fevers, which, it is disputed, are different from it, viz. prostration of strength, disturbance of the sensorial functions, and a peculiar duskiness or darkness of the countenance. Upon what grounds, then, can any distinction be assumed between two diseases, which agree so remarkably in their essential symptoms, and which, as shall now be shown, present similar indications of treatment?

The influence of treatment over the appearances which disease assumes, and over the progress and train of symptoms which attend it, is curious, and deserves more attention than it has yet received. The histories of eruptive fevers illustrate, in a more particular manner, the difference of aspect and termination which distinguish the same disease from itself, before and after the discovery of a rational method of treating it; the disease, in the first instance, appearing clothed with pestilential terror, and proving fatally malignant; in the latter, divested for the most part of its frightful aspect, and not only tractable by medical art, but frequently yielding of its own accord to the sanative powers of unassisted nature. Typhus fever, as an example of the same nature, has undergone a remarkable modification in its character; or, if I may be allowed the expression, has been metamorphosed by the bold but judicious hand of science into a disease scarcely cognizable by those who were wont to dread it as a pestilential fever, dragging in its train all the demons of putrescency and ma-

* Jackson on Fevers, p. 98.

lignity which the clouded imagination of a paralyzed mind could conjure up, and not all the host of alexipharmics and cardiacs could dispel. Inattention to the first stage, as already observed, kept up those symptoms of apparent debility, which led to false indications of treatment, and these latter were the sole parents of the subsequent and unavoidable appearances of malignity and putridity. But if this was the case with typhus in northern climates, has it been otherwise in the tropics? Let one of the most intelligent practitioners speak for himself. Moseley gives us an interesting account of a "Putrid bilious fever," distinct from the endemial causes, and which, if tested by the standard which we applied to the fever described by Hillary, will be found so much to resemble typhus fever, that it cannot be referred to any other class of disease. I am the more confirmed in this opinion, because, although Moseley himself seems to consider it a superior degree of the common bilious fever, he not only allows that it is a *very uncommon* species of that disease, but likewise adds it as his opinion, that the bilious symptoms were the concomitants, not the cause of the disease. To his account of the treatment I wish, however, more particularly to refer. "The coming on of this disease, indicating no considerable degree of fever, neither from the pulse nor skin, without vomiting or purging; and from the extreme weakness into which every person sunk who was attacked, led to a mode of treatment at first, which did not prove successful. Those who had taken their curative indications from the treacherous appearances of the disease, began with supporting the powers of life, and pressing for an opportunity of giving bark." That depression was in these cases mistaken for real debility, must be inferred both from the author's implied opinion, and likewise from the success which followed a treatment opposite to that just described.—"It happened to me at the camp," continues Moseley, "as it does to others who have the superintending any medical department, not always to have seen the patients on their being first attacked: putrefaction had far advanced, and the patients were under the usual course

of antiseptics and cordials, frequently before I saw them. As these medicines did not produce their natural and proper effects, and as at first every man that was seized, died—sometimes two, three, four in a day; I began to consider where the error of treatment lay: and whether it might not originate from the dread of evacuations on account of so much debility in the beginning of the disease."* Dr. Moseley proceeds to state, that after mature reflection, he was convinced that this was the case, and he immediately advised purging at the onset of the disease, and directed it to be continued until contra-indicated by weakness. He then adds—"But so far was the result of that apprehension from being confirmed by the event, that it was found that the men acquired strength in proportion as they diluted and were purged." And finally our author concludes: "We did not lose one man after this mode of treatment was adopted."†

But we have more direct proof in favour of the same point. Hillary, though he does not in general recommend bleeding in the fever, the description of which has been given at length, does nevertheless advise it in cases attended with inflammatory action, and thus adds no little degree of strength to the opinion we have expressed of the identity of the disease which he describes with typhus:—

"Bleeding was in general very prejudicial, *unless* where the patient was of a plethoric, robust constitution, and then only in the beginning of the disease, where inflammatory symptoms indicated it, which sometimes, though rarely, happened."‡ A stronger proof could not be adduced of typhus occasionally assuming its inflammatory aspect in warm climates, and of its not being always a pure asthenic disease of low type.

It is barely necessary to mention the writings of the most enlightened authors on typhus both in Europe and in this

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* Moseley, p. 203. † Ibid. p. 206.

‡ Hillary on Bardadoes, p. 31.

country, to suggest the similarity of views and indications held with regard to the treatment of the same disease, and to show that as far as regards the changes wrought in the system by remedial agents, no less than as has appeared by the morbid appearances, these two diseases are removed by climate and distance only, and not by any difference of nature.

It now remains for me to consider the second objection against the prevalence of typhus in warm climates, viz. that cold is necessary to the production and propagation of the contagion that specifically distinguishes typhus from every other fever. I do not by any means consider the question, whether typhus be contagious or not, so definitively settled as some writers would have us believe. There are many physicians of note, both in Europe and in this country, who have given their unqualified testimony against such a doctrine, and to those who believe with them, the refutation of the objection which I now propose to consider will appear supererogatory. It would, however, be expected that in this discussion it be proved either that typhus is not at all contagious in cold or warm climates or seasons, or if it is so in the one, that it shall, cæteris paribus, possess the same quality in the other. It will not be difficult then, on the latter supposition, which I for the present adopt, to show that the fevers which I have designated as typhus in warm climates are equally contagious with typhus of northern latitudes. Here I must again refer to the pages of the often-quoted Hillary, the value of whose information cannot be denied even by those who are not disposed to accredit him for originality of mind, or extensive views: "The slow nervous fever was certainly infectious, for I observed that many of those who visited, and most of them that attended the sick in this fever, were infected by it and got the disease, and especially those who constantly attended them, and performed the necessary offices for the sick."* If it be objected that this testimony in favour of the contagious nature of this fever is fallacious, because the attendants were equally

* Hillary on diseases of Barbadoes, p. 44.

with the patients exposed to the general cause of disease, and the more predisposed on account of the exhaustion and fatigue incident to their occupation, I can only reply by urging that this argument would not be less subversive of the doctrine of contagion as applied to northern typhus. It is not my object in this place to enter into the general argument involved in this discussion, but merely to show, that the decision of it, be it whatever it may, will reach to the disease no less in the tropics than in cooler regions.

Again: Dr. Fergusson, to whom we are indebted for a most ingenious and able article on yellow fever, says, "I have no doubt but that a typhoid infection may exist here (in the tropics) the same as elsewhere, which, however, is certainly dissipated, as soon as ventilation and purity are restored. This was exemplified in the Childers brig, that lately arrived at Barbadoes in so distressing a state from Trinidad. The fevers on board of her, from crowding below decks at sea, ceased to be yellow fever ones, and became as truly typhoid as any I ever saw; but all that were taken ill after she came into harbour were promptly removed to an excellent hospital, retained the character of yellow fever in every respect, and showed not the least of the typhoid type. That the ship was impregnated with a typhoid contagion capable of infecting others within its sphere, I have as little doubt; and am sure from what I have seen, that crowded hospitals on shore may be brought, for a time, to the same dangerous condition from undue accumulation of sick even in these climates."* In spite of the length of the extracts which the nature of my subject requires, and for which I may perhaps render myself not a little obnoxious to the reproach of want of original matter, I shall be content if I aid in the illustration of an important subject, and continue Fergusson's remarks. "Some well marked cases of typhus fever, and others of a mixed nature, have lately been sent to the hospital from the huts in the rear of the barracks of the Queen's regiment, into which the married people of that corps crowded in great numbers, and they

* Medico-chirurgical Transactions, vol. 8, part 1. p. 52, 53.

had become in consequence *dirty* and *ill ventilated* to a very great degree. Some of these huts, containing more than one family, where washing and every species of nuisance and disorder was to be found, did not contain more than ten feet by eight within the walls, which were of the thinnest shingles, and afforded little or no protection against the sun's heat."* Than this unqualified and unvarnished statement of Dr. Fergusson, whose ample opportunities of observation and accumulated experience, in consequence of the responsible station he holds as inspector of the hospitals in the West Indies, there could not be adduced more positive and satisfactory testimony. And let it not be objected, that instead of typhus contagion, the term typhoid is used in this account of Dr. Fergusson. There is no distinction between the two terms in reality, and it would be easy to show that they are indiscriminately used by authors for each other. After all, if a fever is allowed to be typhoid, in what consists its difference from genuine typhus? Is it in the pathognomonic symptoms that they differ? No. Is it in the contagious property of the one, and the exclusion of the other from this property? No. When a fever is then called typhoid, it has already assumed the character of typhus, and it will be found that it was only to some difference of appearance in the first stages of the disease, from that which marks the severer forms of typhus, that the assumed distinction owes its existence.

It will not be doubted, after the exposition of the authorities just quoted, and it were superfluous to add others, that typhus fever, if at all contagious, is equally so in the tropics and in colder latitudes. The testimony in each case is to the same degree satisfactory, and has met with a like share of contradiction. At the same time, I am free to admit that heat is favourable to the dissipation of contagion, while cold, on the other hand, confines it, and by subjecting a greater number of persons within its sphere, may even extend its dominion. The poorer class of people, for example, who are in general the

* Med. Chir. Trans. ibid.

peculiar subjects of typhus, are accustomed during warm weather, to range abroad, and to open their habitations for the admission of external air; on the appearance of cold weather, however, the scene changes—they then keep more in doors—they bar out the purifying atmosphere from without, and now that ventilation is no longer forced upon them as a means of personal comfort, it is wholly neglected. That the contagion of typhus should then, under other favouring circumstances, be developed with increased action, and even be goaded into malignity, will not appear surprising But cold, it will be perceived, has here exerted a secondary influence only—its agency is remote and accessary, not principal and indispensable. Were it so, then the same combination of causes, independent of cold which produced typhus in winter, would never have this effect in opposite seasons, much less in climates where cold is known only as a name. That this is, however, far from being the case has been fully shown; and I therefore think that we are right in denying our assent to the theory which refers to cold the exclusive power of producing and propagating typhus contagion. It is altogether predicated on an undue estimate of the influence of cold in those cases wherein the appearance of typhus and of cold weather are simultaneous, and is another instance of a common error, by which the mind is induced to connect together events in the relation of cause and effect, which have no other connexion save that of time.*

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* I am happy to find, since writing the above, that a similar view has been taken of the secondary and occasional influence of cold in the production of typhus, in a most able and lucid article on "the causes, cure, and prevention of contagious fever," which appeared in the Edinburgh Review for March, 1819. The paragraph devoted to this subject thus concludes: "As corroborating this opinion, we refer to Dr. Barker's valuable report; where he has shown, by a table, that the fever in Dublin went on, during the whole summer, progressively increasing." Here is another proof that typhus prevails not in cold weather only. Were I inclined to adduce such, I should find them endless. But it is enough if I have shown the disease to prevail where the thermometer is steadily at a medium of 82° Fahrenheit.

I have now shown, I think most satisfactorily, that typhus not only prevails in warm climates, but that there is sufficient authority to warrant us in the belief that the tropical is equally contagious with the northern typhus. I have flattered myself, too, that this discussion would not be unattended with advantages of a practical nature. The gratuitous doctrine which I have combated, and which would teach the physician in the tropics to look upon a fever, which his unbiassed judgment would have unhesitatingly pronounced typhus, as an asthenic disease, attended with low action throughout all its stages, is fraught with no less danger to his success in practice, than to the reputation of the school from which he derives his instruction. It would paralyze his arm in cases where its utmost energy was imperatively called for; and it would not be till a long and lamentable experience had removed the veil which a groundless hypothesis had thrown over his mental vision, that he would unlearn his error, and be enabled to grapple with a foe, which, though it assumes the mask of weakness, will soon crush its victim with a violence of effect, that too late betrays its real strength and power of action. Let then those theorists consider well the serious consequences that may result from the promulgation of hasty and ill-founded views, alike unsupported by fact and argument. The typhus in the tropics is to be encountered by the same bold means, proportioned however to the exigencies of the case, which an enlarged science and more comprehensive pathology have adopted as necessary to subdue the same disease in high latitudes. The influence of climate, and the peculiarities in the customs, diet, and constitutions of the inhabitants of particular places, are not to be disregarded, more than the influence of the same causes operating elsewhere; but this can only modify, not change, the nature of the treatment. A practice contrary to the views here inculcated would be attended with the most fatal results. It would entail on the North the charge of ingratitude, if, forgetting that it is to the tropics she is indebted for the more secure mastery she has attained over disease, she should, instead of reciprocating the

benefits she has received, reflect error and darkness, whence she had derived light and improvement.

Before concluding, I cannot but express my surprise, that Bancroft, who merits no small degree of praise for the extent and value of his researches, should have overlooked the most obvious facts; and with a zeal equalled only by that which he displayed on the yellow fever question, attempt to establish an hypothesis, which, as we have seen, neither experience nor analogy confirm, nor any practical advantages attend. Is it not to be suspected, that, by insisting on the exclusive dominion of cold over the only genus of fever which he admitted was contagious, this author hoped to reflect additional strength from contrast on his favourite view of the yellow fever? His errors on the subject of typhus are the more to be regretted, as they have misled many writers in this country, who, coinciding with him in his opinion of the non-contagious character of yellow fever, have unwarily been led to contrast two diseases, which are not by nature thus associated.

ART. V. CASE *of* STRICTURE *of the* COLON, *with an account of the morbid appearances after death.* Communicated to the Editors by ABRAHAM D. SPOOR, M. D. of Troy, N. Y.

ABOUT the 1st of October, 1816, I was requested to visit Mrs. S. a woman 46 years of age. Her youngest child, which was the seventh, was about three months old when I first saw her. She had for several years been subject to flatulencies and nervous complaints, commonly denominated hysterical, but had no other disease that required particular attention. At the birth of her last child, nothing occurred to render her situation extraordinary, or to which she could attribute any of her sufferings. She recovered as well as usual from her former confinements, excepting that her old complaints were very much aggravated; and to these were now added great acidity, nausea, and vomiting, particularly after

taking food, painful spasms of the bowels, and other symptoms of intestinal derangement. Her pains always terminated in a sense of stricture or straitness in the left iliac region. For these symptoms anodynes and cathartics had been given alternately for five or six weeks. The anodynes, when retained, gave her some intervals of ease, but as the cathartics produced but trifling evacuations, her abdomen became considerably distended, and the spasms more violent. The spasms returned every five minutes, and during their continuance her sufferings were almost intolerable; very much resembling those of strangulated hernia. Different portions of the abdomen were affected with this spasm at the same time, rendering the integuments as firm as a board; every paroxysm of pain was preceded by borborygmi, that might be heard in any part of the room, and succeeded by nausea and vomiting; during these spasms, the abdomen was very sore to the touch, which was not the case during the intermission. Her tongue was covered with a brown fur, and her pulse was about 100 in a minute, small, and hard; her respiration somewhat laborious, or hurried, by the distention of the abdominal viscera preventing the descent of the diaphragm; there was no material change in the urine, as to quantity or appearance, but the evacuations from the bowels (which could be obtained only by injections) were in the form of very small, hard, almost dry, lumps or scabali, suspended in the liquid of the injection. Six weeks had elapsed in this way when I first saw her, and as the care of the patient after this devolved on me, I shall briefly state the remedies that were applied.

To mitigate, or if possible remove the nausea and vomiting, which I considered as sympathetic, and depending on the violence of the pain in the bowels, I gave her a full dose of opium in an alkaline solution, and repeated it in small doses, till it produced that effect. I then applied a tight flannel bandage to the abdomen, in order to give some mechanical support to the over distended parts, and at the same time introduced a large unarmed clyster pipe into the anus, to overcome the action of the sphincter, and suffer the fœces and flatus to

pass off. By these means the vomiting became less frequent, and as the evacuations from the bowels were very scanty, a decoction of senna with carminatives was given her, which, with the aid of a stimulating injection, had some effect, but the female who administered the injection told me that she felt unusual difficulty in sending it up, although she was experienced in that business. The fœces were of the consistence above-mentioned, and were unaccompanied by flatus; her abdomen continued to be distended, and sounded like a drum when struck with the fingers, as I imagine it would in tympanitis, of which, however, I never had seen a case at that time. With a view to restore tone, she took a cold infusion of colombo, with the opiates and other palliative remedies, such as assafœtida: and the abdomen was rubbed briskly with camphorated volatile liniment, as warm fomentations had been freely employed previous to my seeing her without any benefit. Cold applications were used, which seemed to mitigate the spasms a little, but their effect was transitory. Another physician was now called in consultation, small doses of calomel were given in connexion with the above remedies, with a view to change the secretions, and a blister applied to the abdomen, instead of the camphorated liniment, but without any apparent relief.

As the distention seemed to be produced chiefly by flatus, and all attempts at relief proved abortive, probably on account of the bowels being so far distended as to be unable to act upon their contents, I was induced by the following expedient to favour its exit. I ordered a stimulating injection to be administered, and then placed her on her back somewhat inclining to the left side, with her pelvis elevated during its operation, in order that the specific lightness of the incarcerated air might co-operate with the action of the bowels at that time in propelling it onward with the fœces, the action of the sphincter being taken off by a very large unarmed pipe. By these means considerable air was discharged. The distention was diminished about six inches in the circumference of the abdomen, although the spasms were but little milder. The relief

which I had experienced from this practice in cases of colic, induced me to try it in the present instance. Her strength and appetite were somewhat improved; but this apparent amendment continued only for a short time, she soon relapsed into her former situation, with an aggravation of all her symptoms. Opiates in very large quantities procured but a slight remission of her sufferings; her abdomen became daily more tense; still it was not painful on pressure, unless affected by spasm. The pains increasing in violence, exhausted her little remaining strength; she gradually sunk, with sometimes a cold sweat upon her, and a pulse scarcely perceptible; the motion of the bowels became so inverted, that she vomited feculent matter. Thus worn out with torture, and extremely emaciated from want of nourishment, she fell a victim to her disease.

The following were the appearances on dissection: a deltoid incision of the abdominal parietes, the angle of which was at the scrobiculius cordis, continued to the spine of both ilia, formed a flap, which, when turned down, exhibited the colon distended to three and a half inches in diameter, distorted and displaced, occupying almost the whole cavity of the abdomen; its coats a little inflamed, with a few irregular gangreous spots on it, about the size of a shilling. The omentum was entirely obliterated, or so distorted by the distention of the colon, as not to be easily defined. The valve of the colon was partly obliterated; the vermiformis was mortified at its extremity; the ilium was also very much distended, with the same appearance of its coats; the mesocolon was very much on the stretch; the peritoneum lining the abdomen was considerably inflamed, but there was not the least collection of water or pus in its cavity; the liver was sound, but rather pale and firm in its texture, and the gall bladder full of thin bile: in the pelvis all was sound. On examining the colon in its descent on the left side, there was an unusually firm attachment of the gut to the os ileum, where the sigmoid flexum lies in the concavity of that bone, and where it is naturally laid

down by a process of the peritoneum. At the point where this connecting medium was attached to the colon, there was a schirrus hardness of the latter.* This morbid part, with two inches of the intestine above and below it, was taken out and examined. The hardness was found to be a thickening of the coats, or rather a schirrus stricture. The calibre of the gut was so contracted as to admit, with some difficulty, a probe to pass. Immediately above the stricture, the bowel was distended to nearly twelve inches in circumference; resembling, in some degree, a bladder blown up; but below the stricture it was much less than usual.

The extent of the stricture in the longitudinal direction of the gut, was about one inch; the opening, when viewed from above, appeared very smooth and circular; but from below it presented a very irregular appearance, and was thrown into circular folds, as if successive portions of the gut had been pushed down, by the violent action of the superior part; there was a little ulceration within the stricture, from which some matter was squeezed; on both sides of the gut, where the mesocolon was attached, there were evident marks of previous inflammation, and consequent adhesion, which gave it the appearance of a cicatrix. I shall conclude the history of this case by offering the following conjecture respecting the cause and nature of the morbid appearances just described.

The unusual adhesion of the gut to the left os ileum, I am inclined to think, was the effect of inflammatory action excited, probably, during gestation, or incidental to parturition, at the birth of her last child. The motion of the gut at this place, being by this means circumscribed, while the rest of the canal retained its usual freedom of action. The spasmodic action of the superior portion to which she had been subject previously, and which was now increased by the additional irritation of this part, has thrown the gut into a circular fold, and produced a sudden distortion, which, with the thickening of the coats, has nearly shut up the canal at this place. The ir-

* This morbid preparation is now in the possession of Doctor Mott.

ritation arising from such obstruction was the cause of the violent spasms, by which successive portions of the gut were pushed down and impacted in the constricted part, constituting intussusception, consolidated by inflammation. Copeland in his Treatise on Diseases of the Rectum, relates several cases of stricture in that gut with similar symptoms, but in no case, that I recollect, was the obstruction so high up as in the present.

ART. VI. CASE *of* UTERINE HEMORRHAGE *succeeded by* PHLEGMASIA DOLENS. Communicated to the Editors by WILLIAM HANDY, M. D. &c.

THE following case seems to me to present peculiarities sufficiently interesting for publication.

On the 27th of August last, at 11 P. M. I was requested by Dr. Macauley to visit with him, in consultation, Mrs. A., a lady of about forty years of age, then supposed to be in the commencement of the ninth month of her eleventh pregnancy. The account he gave me of her case was as follows: That he was called to her early in the morning of the 27th of July, when he was informed that she had been suddenly taken the night before with flooding, unattended by any pain. Her friends had given her laudanum, and made use of cold applications, which had lessened the discharge. The hemorrhage continuing, the same remedies were repeated three successive days and nights, during which it was supposed she had lost from seven to eight pounds of blood. A feverish state having succeeded, with a full, hard pulse, white tongue, dry skin, and redness of the eyes, she was bled to eight ounces from the arm, with immediate relief. She continued comfortable for a fortnight, when, in consequeuce of violent pain in the head, fever, and great restlessness, she was again bled to ten ounces, with speedy and great benefit. She remained free from any serious indisposition until Friday, the 24th of August, in the afternoon, when the bleeding again returned, and was arrested by exter-

nal applications and rest. On Saturday and Sunday the discharge was small. On Monday it returned with greater violence, when she lost about two pounds of blood. The pulse was again excited, accompanied by headach, general uneasiness through the system, and the several symptoms of a febrile condition, which attended the first attack. She was again bled to six ounces, with sudden and great relief. The hemorrhage now ceased. In about four hours after, her strength failed, and she was seized with fainting fits.

On visiting her, I found her in a very low and languid state; her pulse 108 in a minute, and very feeble; her lips and whole countenance pale; her extremities cold, with an occasional dull pain, as she expressed herself, in the small of her back. She had considerable thirst, great nausea, and a constant desire to change her position. The hemorrhage had now nearly ceased. The vagina was filled with coagulated blood; but there was scarcely a perceptible dilatation of the os internum. Heated flannels, &c. were applied to the extremities; an anodyne with forty drops of laudanum was given, and light cordial nourishment frequently administered in such quantity as the state of her stomach would bear.

28th. 6 A. M.—Had a succession of fainting fits until two o'clock this morning. Her pulse is now depressed, feeble, and irregular; her extremities cold, her countenance very pale. Restlessness—nausea—no return of hemorrhage.

9 A. M.—Continues the same.—Agreed to meet at noon.—Labour having commenced, I was called in at about ten o'clock. She was still without hemorrhage; but as in the exhausted state of the patient, the most fatal consequence was apprehended from such an occurrence, every preparation was made to meet it. On examination, a large portion of the placenta was discovered protruding before the head of the child, and, in a little more than half an hour, the whole of it, enveloped in the membranes, was expelled by the pains. The membranes were now ruptured, and the waters discharged; when the pains, though feeble, continuing to act upon the child, it was, in half an hour, delivered, having apparently

been dead many hours. Its size was such as fully to warrant the conclusion, that it had been carried the ordinary full time of gestation. No hemorrhage ensued its birth; but the mother was exhausted nearly to death, and immediately sunk into a state of alarming syncope. Her pulse was no longer felt at the wrist, her extremities were of a deathlike coldness, and a cold sweat was generally diffused over her. A compress, supported by bandage, was applied to the abdomen, and by the diligent use of friction, and warm applications to the extremities, she so far revived as to be able to speak. Her countenance was, nevertheless, most ghastly; there was no perceptible return of circulation at the wrists, a hiccuping followed, and a constant disposition to syncope. As soon as she was able to swallow, there was given her, in small quantities at a time, light cordial nourishment, consisting of panado and gruel with wine, warm sangaree, and other cordials; and, occasionally, beef tea. These were alternately given to her once in six or eight minutes, while several persons were employed in chafing, and in the renewal of warm applications to her feet, legs, hands, and arms. Her respiration was laborious, and although she retained what was taken into the stomach, she had constant nausea, and when able to speak, which she did with great fatigue, she complained of painful oppression and tightness across the chest, and, as she expressed it, a confusion in her head. She is very drowsy.

At half past four, P. M. though there was no distinct pulsation, a slight tremulous sensation was communicated to the fingers, on pressure of the radial artery. Her countenance was still ghastly, her respiration laborious and fatiguing; she had hiccup; her extremities and face were cold, she sighed frequently, and was very restless. Her intellect was entire, her speech distinct, and she greedily received the nourishment which was given to her.

8 P. M.—Pulsation at the wrist rather more distinct. Drowsiness continues, and she sleeps with her eyelids but half closed. Temperature of the skin a little increased, but still morbidly cold. Breathing less painful. Takes sufficient

nourishment, and retains it. Hiccup less frequent, and she is less restless. Lochia moderate.

29th.—On entering her room this morning, she observed, with great cheerfulness, previously to being interrogated, that she was much better, and had passed a tranquil night. A natural and equal warmth is restored to the surface, and her skin possesses a healthy softness. Had a copious discharge of urine in the night. Some after pains.

My visits with Dr. M. were continued until the fourth of September, when our patient appeared to be so far a convalescent as to induce me to retire. She still complained of an uncomfortable sensation in her head; her countenance was pallid, and there was that paleness of the tongue and lips which frequently attends the languor of circulation at the surface, consequent on an excessive loss of blood. There had been no evidence of a secretion of milk since her delivery.

On the 17th I was again requested to see her with Dr. M. It appeared that, since my last visit, she had convalesced slowly, although her appetite and rest had been natural, and she had repeatedly walked from one room to another. The confusion in her head, as she described it, and pallid countenance and lips, still continued. On the 15th and 16th she had fever, preceded by slight chills, some pain, and a sense of weight and stiffness about the left hip, and a want of the usual power to move the left thigh and leg. There was now a great enlargement of the limb from the hip downwards. A swelling had suddenly appeared, white, elastic, tense, shining, warm, with the other concomitants of phlegmasia dolens, except, fortunately, extreme pain and tenderness of the diseased limb when touched. Her pulse was at 120 in a minute, and feeble; skin dry; she had thirst, and her body was costive. The swelling has been fomented with flannels wrung out in hot vinegar, and embrocated two or three times a day with a mixture of ammoniated and soap liniment and laudanum. Her bowels have been kept open, and her skin soft by the use of neutral salts combined with mild diaphoretics. The swelling is now much reduced, she has but little fever, and her appetite,

spirits, and sleep, are good. Complaint in her head diminished. Secretion of urine copious. Her tongue and lips continuing to be pallid, with some œdema of the diseased leg and foot, and being free from fever, in addition to a small quantity of animal food, and porter sangaree, which have been allowed her a few days past, the muriated tincture of iron was this day prescribed.

The remedies which had been thus employed in the case of Mrs. A. were continued until about the 10th of December, 1821; her legs, particularly the left, being at that time considerably swelled. Her general health had so far improved, as to admit of her taking exercise to a certain degree, notwithstanding the inconvenience of swelled limbs.

On the 10th or 11th of December, she commenced a journey, in a gig, to Woodbridge, in New-Jersey, a distance of eighteen miles. On arriving within two or three miles of Newark, she suffered so much from cold, as to induce her, for the purpose of more brisk exercise, to quit the gig; and to walk and run together, a distance of about a mile. After dining at Newark, she continued her journey, and arrived in the evening at Woodbridge. Retiring to her bed-room, she found, to her great joy and astonishment, on taking off her stockings, that the swelling of her legs had wholly disappeared; and she assures me, that she has not since observed the smallest return of it. She came home the following day, and in a few days after, her menses, which had been suspended since the beginning of September, appeared, and have from that time been regular in their recurrence.

From the above period she was free from complaint until December last. She was then attacked by a pneumonic affection, from which she has recovered, and is now in good health.

Warren-street, 23d Dec. 1822.

ART. VII. REMARKS *on the medicinal properties of the* PRUSSIATE *of* IRON. In a letter to WILLIAM ZOLLICKOFFER, M. D. from DAVID HOSACK, M. D. Professor of the Theory and Practice of Physic, and of Clinical Medicine in the University of New-York.

New-York, June 1st, 1823.

DEAR SIR,

I AM much obliged by your communication containing your valuable pamphlet on the Prussiate of Iron. Long since, through the medium of foreign journals, I was made acquainted with your discovery of the beneficial effects of that valuable addition to the materia medica. During the last period of my attendance at the New-York hospital; viz. in September, October, and November, I prescribed the Prussiate of Iron for the relief of patients labouring under intermittent fevers, cases of which were uncommonly numerous at that time in that institution, and certainly with surprising and unexpected success. For it is well known, that none of the ordinary preparations of iron have been found to possess sufficient activity to resist the returns of the paroxysm of that form of febrile irritation. I have not yet given it in the remittent type of fever, but am persuaded that it will be found a great acquisition in the management of that form of disease. I have made known its medicinal properties to my class, many of whom witnessed the exhibition of the remedy in the hospital. As you yourself have stated, I have found it may be given in every stage of intermittents. The dose which I have employed has varied from four to six grains given three or four times within the twenty-four hours. It has never disturbed the functions of the stomach, or created nausea, even in the most irritable condition of that organ.

Another prescription which I had previously made great use of, in my private as well as hospital practice, in the treatment of intermittent fevers, is a combination of Peruvian bark

with the citric acid, and which I have found much more efficacious than any other preparation of the cinchona. The receipt is as follows :—

℞ Cort. Peruv. pulv. ℥ j.
Acid. citric. ℥ ij.
Aq. font. ℥ vi. M.

Of this composition one or two table spoonsful given from one to two hours during the intermission, has very generally prevented the second, if not the first succeeding paroxysm. Let me ask, does not the bark in this combination with the citric acid acquire properties somewhat analogous to the salt of bark prepared with the sulphuric acid, viz. the sulphate of quinine, so successfully exhibited in intermittents by some physicians of the continent, particularly by MM. Robert, Petroz, Chomel, and others?*

In a case of hemicrania, which returned periodically, and in which the ordinary means proved unavailing, I have also prescribed the Prussiate of Iron with the best effects. Recently, too, I have directed it with great benefit in preventing the paroxysms of epilepsy, which were of frequent occurrence at the time the medicine was first prescribed. The gentleman, the subject of this disease, aged about fifty, had laboured under the disorder many years, and at the time I advised the Prussiate of Iron, the paroxysms had become unusually frequent, and occasionally as many as ten or twelve paroxysms occurred within the twenty-four hours. The salutary effects of the medicine were speedily manifested.

With great respect, I am,
Your obliged friend,
DAVID HOSACK.

Dr. Zollickoffer.

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* See Quarterly Journal of Foreign Medicine and Surgery, vol. iv. also, Med. and Phys. Journal of London.

Art. VIII. Case *of* Metastasis. By P. S. Townsend, M. D. New-York.

There is no principle in pathology less understood or better established, and none that may be turned to a more useful account in the treatment of diseases than that of metastasis.

We do not mean by this term the translation of the same morbific matter from one part of the system to another, but the creation of a new focus of disease, and the evolution of a new series of morbid phenomena, which annihilate or supersede those which had previously existed.

Whether there be any absolute or necessary catenation between the primary and secondary affection, or any mysterious sympathy between the organs or parts successively involved in disease, yet remains a matter of uncertainty. Upon the whole, it does not appear that there is in this respect any essential or fixed relation; for the same disease may at different times be converted into diseases, and translated to parts which are totally dissimilar.

Predisposing causes, such as climate, temperament, age, sex, previous disease, &c. turn the current sometimes upon one and sometimes upon another organ.

Critical eruptions and abscesses are referrible to the same principle; so also are the terms revulsion, counter-irritation, &c.

As the following remarkable case illustrates this principle or law in a very striking manner, it will not, I trust, prove unacceptable.

W——n, a black man, of robust frame, and labourer by profession, was attacked in the month of December with violent symptoms of pulmonic inflammation. When I was first called, he had been suffering for two or three days, and had had no medical attendance. The night sweats and expectoration were both profuse, owing probably to the force of the arterial excitement, for the pulse was strong, bounding, and tense. I accordingly bled the patient copiously and repeat-

edly, which treatment, with the co-operation of blisters, cathartics, and the ordinary routine adopted in similar cases, in the course of five or six days effectually subdued the disease. The fire, however, was only driven from one corner of the system to be re-kindled in another; for while the pneumonic symptoms were declining, the flame broke out afresh in the form of orchitis. The testes became violently inflamed and swollen, and the constitution re-involved in fever to so great a degree, that I was obliged again to recur to venesection and other general depleting means, besides the local application of emollient cataplasms to the part. It is much to be regretted that the leeches of this country are good for nothing, and that those from France and England cannot be introduced here or imported without hazard of losing them. They would doubtless have been of infinite service at this moment of the disease.

Notwithstanding the active measures which had been employed, erysipelatous inflammation supervened, terminating in gangrene, sphacelus, and sloughing of the scrotum, all the anterior half of which was completely carried away, leaving the testes entirely exposed, and covered only by the tunica vaginalis. The fœtor was intolerable, the pulse became frequent and feeble, and there was much anxiety and prostration.

Bark, muriatic acid, the bitter infusion, wine, yest, &c. internally; and poultices, every few hours, of a combination of bark, alcohol, yest, and Indian meal, had been administered, but proved of no avail.

The parts were now encompassed by a cordon of blistering plaster, one slip being applied over the pubes, one in each groin, and one across the perineum.

This remedy, the honour of discovering which belongs to Dr. Physic, immediately suspended the progress of the mortification. Healthy granulations soon after made their appearance on the edges of the remaining part of the scrotum, and over the vaginal tunic. As these increased, they were gradually approximated by the assistance of adhesive plaster, until the breach was entirely contracted and the cure completed.

In this case, the determination or derivation of the bronchitis to the testes, was owing perhaps to predisposition from urethritis in early life, and to a partial stricture which the patient has ever since laboured under.

ART. IX. CASE *of* SARCOMATOUS *enlargement, with encysted* DROPSY *of the* RIGHT OVARIUM. By JOHN W. FRANCIS, M. D. Professor of Obstetrics in the University of New-York.

NOTWITHSTANDING the many cases which are recorded of disorders of the ovaria, and that by the most illustrious writers, our diagnosis of these affections yet rests upon no well established criteria, and the methods of treatment are various and unsettled. A similar obscurity conceals from our view the causes which occasion these too frequently fatal complaints. In the present instance, I have put together several interesting facts and circumstances, which, though they do not remove the difficulties which have embarrassed pathological inquiry, may possess the merit of adding to the data upon which a satisfactory decision must ultimately be founded. Few disorders so strikingly show the remarkable powers of the animal economy in accommodating itself to morbid changes when gradually effected, as the disease under consideration.

Mrs. M—, the subject of the present case, aged about twenty-six years, the mother of two children, observed her abdomen to enlarge, and believed herself to be in her third pregnancy. The usual symptoms of this state characterized her condition; and she felt, as she supposed, about the period of quickening, the most positive assurances of the fact. Yet as the enlargement of her abdomen was different from that of her former pregnancies, fears were excited that some peculiarities in her situation had taken place. A physician was sent for, who, upon examination, pronounced that the tumour of the belly was occasioned by ovarian dropsy, and that she had no enlargement of the uterus itself. Other physicians were

called in, who considered her case as an instance of extra-uterine fœtation, and persuaded themselves that the head and shoulders of the child could be plainly felt through the abdominal parietes. Upon subsequent consultation, it was deemed adviseable to wait until the usual period of nine months gestation had elapsed, and some distinct evidences were manifested, by the efforts of nature, that a proper period had arrived for the operation of removing the fœtus.

When this supposed period had arrived, one of her medical attendants made an incision several inches long, in a direction from the umbilicus to the anterior spine of the ilium on the right side. After cutting through the peritoneum, and opening the presenting part, instead of finding a child, a quantity of thick, whitish fluid was discharged. Persuaded that a sac had been cut into, other tumours were laid open, which discharged a fluid of a different consistence. The quantity let out from the whole was several pints. Great constitutional irritation followed this wound, but she at length recovered from the operation.

Some months after this time, my colleague, Dr. Mott, professor of surgery in the university of New-York, was requested to visit her with her family physician, as she had continued to enlarge, and was in extreme distress from the increased distention of the abdomen, and the necessary attendants on her disease—pain about the groins and thighs, irritation of the stomach and intestines, great difficulty of breathing, and occasional syncope. A large fluctuating sac was to be felt on the left side of the abdomen; and as from its bulk as well as situation, it made great pressure upon the diaphragm, she was prevented in a great measure from lying down. In order to render her remaining days somewhat more comfortable, it was agreed upon that this sac should be opened, to which operation she readily consented. Dr. Mott accordingly introduced a trocar, and evacuated nearly two gallons of fluid resembling in colour and consistence thin glue. Her most urgent and distressing symptoms were mitigated for a while by this discharge, but she died two weeks after this period of

constitutional irritation, depending on the great extent of her disease. The wound had kindly healed.

A few hours after her decease, the morbid mass was carefully examined. Upon laying open the abdominal parietes, several pints of fluid were found in the peritoneal cavity. The abdomen was filled with an immense congeries of tumours of different sizes, from that of a pea or small marble, to those of a capacity to contain several quarts: they were of various shapes, and were occupied with fluids of different degrees of consistence and colour. In some the fluid was quite thin and pale; in others altogether gelatinous and inodorous; and in others again the contained mass was composed of substances resembling pieces of fleshy matter, and fœtid. The coats of several of the tumours differed materially from their fellows. Their thickness was various; some were as thin as vesicles, and others were found to be solid and sarcomatous. The inner surface of some of the cysts was corrugated, and imparted a papillar feel. There were in several places patches of indurated flesh interposed between the tumours, and sometimes they communicated with each other by tolerably large passages.

These disordered masses were not limited in their extent to the abdomen; the pelvic cavity was also occupied, and on the right side a large tumour was found forcibly impacted within the pelvis, and pressing upon the fundus of the bladder. In the drawing accompanying this account, I have endeavoured to give a comparative view of the size and situation of these parts, by raising up and supporting this tumour by the handle of the knife. The patient at times sustained much inconvenience from this particular situation of parts, particularly when endeavouring to pass urine.

This collection of cysts was found adhering to the viscera at several points, and particularly to the parietes of the abdomen at the place of incision; at which place also the sacs thus emptied were found to be in a dense and sarcomatous state.

Upon examining the tumour after its removal from the body, it was found to be the right ovarium, and to have its natural

attachment to the broad ligament of that side. It weighed nearly thirty pounds. Dr. Baillie has observed, that these cysts have occasionally been confounded with hydatids, to which they bear some resemblance. They are, however, he adds, very different. "They have much firmer and less pulpy coats than hydatids; they contain a different kind of fluid, and they are differently connected with each other. Hydatids either lie unconnected with each other; or a large hydatid encloses a number of small ones; or smaller hydatids adhere to the coats of those which are larger. Cysts of the ovarium adhere to each other laterally by pretty broad surfaces; do not enclose each other, and appear to have no power analogous to generation, as hydatids have, by which smaller cysts are formed, that are attached to those of a larger size. It appears not improbable, that these cysts are formed by a gradual enlargement of the small vesicles which make a part of the natural structure of the ovaria."*

From a careful examination of the structure and connexion of the several cysts or tumours in the present case, and the variety in their contents and consistence, independently of other morbid appearances, I have no doubt as to the nature of the disease—a sarcomatous enlargement with encysted dropsy of the right ovarium. The uterus was in its natural state.

No satisfactory cause can be assigned for the present disease. Affections of this nature have been attributed to several circumstances: injury done the uterus in parturition, by the injudicious management of the placenta; blows upon the abdomen, &c. I have some reason to conclude, that the disorder commenced a considerable period before the patient uttered many complaints concerning her situation. We know it is often insidious at first, and continues for years without much disturbance of the general health. Morgagni is replete with facts of this kind. She was an interesting woman, of virtuous de-

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* Baillie's Morbid Anatomy. See also Monro's Morbid Anatomy of the Gullet, &c. and the late work of Dr. Baron, a Treatise on the Tubercular Accretion of Serous Membranes.

meanour and exemplary habits, and was deemed by her friends to be in a delicate state of health several years before her marriage. I attended her in an attack of typhus fever in the fall of 1817. Shortly after this time she repeatedly complained that her strength was wasting: and that she was inclined to become dropsical, which she attributed to her sedentary mode of living.

Dr. Hunter has given it as his opinion, that dropsy of the ovarium is an incurable disease; and that that patient will have the best chance of living longest under it, who does the least to get rid of it. On the contrary, Dr. Hamilton, jun. has lately stated, that he has cured seven cases by percussion, or patting for a length of time daily on the tumour, using a bandage, so as to make constant compression, giving a solution of muriate of lime, and employing the warm bath.* Other methods of cure are stated by different writers. Dr. Percival relates an instance of recovery produced by vomiting; and Cooke, in his edition of Morgagni, gives a case which appears to be an example of spontaneous recovery.† In a case to which I was called in consultation about ten months ago, I have been led almost to a like conclusion, from the present situation of the patient. Dr. Hosack has also stated to me an instance of ovarian dropsy, of long standing, in which, by an operation of drawing off a quantity of the fluid, by means of the trocar, he rencered the lady's situation much more comfortable, and protracted her life, as was thought, several years.

It is well known that tapping is occasionally resorted to for present relief in this desperate complaint, and that it has occasionally been the means of ultimate cure. The late Dr. Richard S. Kissam, of this city, informed me that in the year 1806, a case of this disease came under his care. Tapping was had recourse to with success. Nearly six quarts of water were drawn off. The patient afterwards proved pregnant, and became the mother of five children.

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* Hamilton on Mercurial Medicines.

† Vol. ii. p. 523.

In another formidable case of sarcomatous enlargement of the ovarium, which was followed by peritoneal dropsy, the patient, aged about 70 years, was operated upon with the trocar by Dr. Mott five times, at intervals of about eight or twelve weeks. By this means, her situation was in every respect rendered more comfortable, and her life greatly protracted. The quantity of fluid evacuated at each operation varied from twelve to twenty quarts. It was of a thin saponaceous appearance.

In his brief but valuable observations on this disorder, Dr. Good has the following remarks.—"A more radical mode has been proposed, but so far as I know, only proposed—that of extirpating the ovarium; which, however, for various reasons, is not likely to be brought into practice. De Haen regards such an operation as doubtful, and Morgagni asserts it to be impossible."* It deserves to be here stated to the honour of the profession in America, that Dr. McDowell of Kentucky, has published an account of three cases, which, by extirpation of the ovaria, the patients recovered.† And in a communication on this subject, which I lately received from a graduate of the medical school of New-York, Dr. John O. Ewing of Tennessee, he states—"Dr. McDowell of Kentucky, operated a few months since in the neighbourhood of Nashville, Tennessee, on the lady of General T— O—, for ovarian dropsy. I was not present at the operation, and had not afterwards an opportunity of becoming acquainted with the Doctor. But I was creditably informed that the operation was commenced with the intention of extirpating the dropsical sac. The operator finding, however, that adhesions had taken place, the separation of which would endanger the life of the patient, contented himself with evacuating many pounds of a tar-like matter, and then successfully attempted the obliteration of the sac by adhesion. He is said to have extirpated the ovaria five times, and three or four times with complete success."

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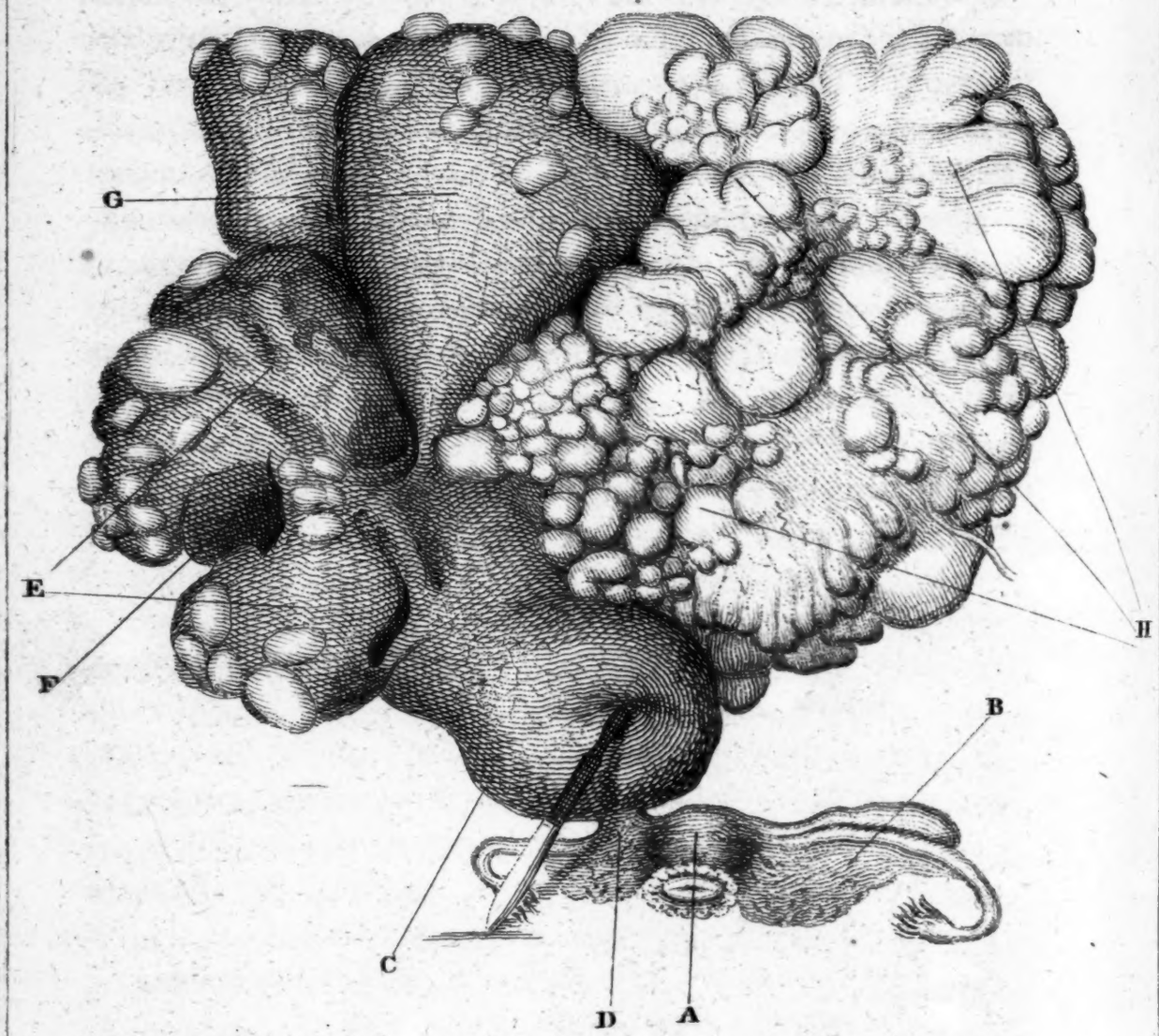
* Study of Medicine, vol. iv. p. 415.

† Eclectic Repertory, vol. vii. see also vol. ix.

Case of Ovarian Dropsy.



It appears from an analysis of a work recently published in Germany, by Professor Dzondi, of the university of Halle, that the author considers encysted dropsy, both of the peritonæum and ovaries, as remediable by surgical operations; and this opinion he founds not solely upon theoretical views, but upon the testimony of successful experience.*

Professor Smith, of Yale College, has also lately favoured us with an interesting case of ovarian dropsy successfully removed by a surgical operation. The patient was aged 33 years, and had borne five children, two previous and three subsequent to her discovering the tumour. No unfavourable symptoms occurred after the operation; in three weeks the patient was able to sit up and walk, and perfectly recovered.†

The annexed engraving, from an accurate drawing made by Dr. A. Clinton, will convey a correct idea of the case, the subject of the present paper. The tumour is preserved in the morbid collection of Dr. Mott, to whom I am indebted for the leading facts in the history of the disease.

Explanation of the Plate.

A The Uterus in its natural state.

B The broad Ligament of the left side, and its appendages.

C The Tumour, immediately attached to the broad ligament, dense and sarcomatous, and which occupied the pelvic cavity. It is raised up by the knife.

D The attachment to the broad ligament, by which the whole mass was principally cherished.

E The Sacs which were opened at the first operation.

F The opening made by the first operation.

G One of the large Sacs which contained several pints of fluid.

H The various Sacs or Tumours, as they appeared after removing the collapsed empty Sac which Dr. Mott opened.

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* American Medical Recorder, vol. iii. p. 61.

† American Medical Recorder, vol. v. p. 124.

ART. X. REMARKS *on the* COLUMBA MIGRATORIA, *or Passenger Pigeon.* In a letter to Dr. J. W. FRANCIS, from DE WITT CLINTON, Esq. LL. D.

Albany, April 24, 1823.

DEAR SIR,

THE Columba Migratoria, or Passenger Pigeon, is a bird peculiar to North America. It extends its migrations from Hudson's Bay to the Gulf of Mexico, and it occupies occasionally that vast region which reaches from the Gulf of St. Lawrence to the Rocky Mountains. Its change of residence is not owing to the influence of heat or cold, of rain or drought, but is made with a view to the acquisition of food. The vast flocks in which this bird congregates, are unequalled as to extent. La Hontan says that the Bishop of Canada has been forced to exorcise them oftener than once, on account of the damage they do to the products of the earth. Weld, an English traveller, speaks of a flock eighty miles long flying over Lake Ontario; and Wilson, the great ornithologist, estimates one seen in Kentucky two hundred and forty miles long, a mile broad, and containing two thousand two hundred and thirty millions, and two hundred and seventy-two thousand pigeons, which would consume on a moderate allowance, seventeen millions four hundred and twenty-four thousand bushels of mast a day.

The gregarious habits and vast flocks of this bird will of course occasion a correspondent consumption of food; and it is therefore compelled to be constantly erratic, and to be among the feathered race what the nomades are among mankind. The rapidity of its flight is superior to that of the carrier pigeon, which has been known to pass from St. Edmundsbury to London in two hours and a half. At this rate, the Passenger Pigeon can travel seven hundred miles in twenty-four hours; and at the rate of a mile a minute, the same distance in less than twelve hours: and this velocity may account for undigested rice being found in its craw six hundred miles from

the rice fields: but as this has been observed in the spring of the year, it must have been derived in that case from the gleanings of a former season, or procured at a greater distance, or confounded with the zizania aquatica of the western waters. The favourite food of this bird is the beech nut; and it prefers to establish its roosting quarters and its breeding place within the reach of this aliment. It also subsists on the acorn, chesnut, wild cherry, seeds of the red maple, and of some weeds, poke, and other kinds of berry, buckwheat, and the principal cerealia. It resorts to the sea-shore and the salines of the west for salt, and it is frequently seen at the mineral springs of Saratoga enjoying the luxury of the waters.

This bird is in much request as an article of food: and in the spring it arrives at an opportune period for our markets, during a scarcity of domestic poultry, and in the interval after the consumption of most of the old stock, and before the maturity of the new brood. In the hard winter, as it is commonly called, of 1741, the weather was intensely cold from the middle of November to the latter end of March. The snow was six feet deep. The Hudson River was passed on ice at the city of New-York. The cattle perished; and the deer were starved for want of food. The prices of food and fuel were exorbitant, and the sufferings of the poor were severe. In this crisis, and five or six weeks earlier than the time of their usual appearance, flights of wild pigeons appeared in greater numbers than were ever before known, and which, by the abundance of the food thus afforded, greatly relieved the prevalent distress. This at the time was attributed to a special interposition of Providence, under a supposition that this bird is incapable of resisting severe cold; and this is now the general impression, which shows that its nature is not well understood. It has been seen at Hudson's Bay in the month of December, and large flocks were observed in Albany and the north-western parts of this state in January and February, 1819.

There are other errors with respect to this bird. It is generally believed, that it will not breed in captivity, and that it is incapable of domestication. And our distinguished orni-

thologist, Wilson, has unhesitatingly asserted, that it only has one squab or young at a time.

If this latter position were true, it would furnish an anomaly in ornithology. All birds of the Columba genus, have heretofore been supposed to produce by pairing, and to have two young at a time, generally a male and female. The male pigeon participates in the labours of nidification and incubation, supplies the female with food when on the nest, and assists in feeding the young. But where polygamy prevails among birds, the whole labour devolves on the mother. The domestic or exotic pigeon lays two eggs at a time; and our only indigenous birds of the Columba genus (besides the Passenger Pigeon) the turtle dove and the ground dove, do the same. Why then should the Passenger Pigeon be an exception? The male assists in building the nest, and occasionally relieves the female in incubation; and it is remarked, that in the breeding season, the two sexes are never seen together. This is owing to their divided labours: for the male makes up for the greater devotedness of the female to incubation, by occasionally supplying her and the young with food. We then can see no reason for so strange a departure from the general rule, attributed by Wilson to the Passenger Pigeon in the extent of its production: and when we further consider the prodigious flocks of this bird, transcending all other collections of birds, we cannot easily acquiesce in his opinion, especially as he admits that it only produces three or four times in a year. But there is no reasoning down facts, and this is a question of fact. On diligent inquiry, I am satisfied that Wilson has been misled by inaccurate information. Benjamin Wright, Esq. one of the principal engineers on the Erie canal, says in a letter dated the 14th of August, 1822, "Wilson is under a great mistake when he asserts that the wild pigeon has but one young. I am confident of seeing, when a boy, two eggs in the same nest. In order to be certain that my memory was not treacherous, I have consulted Mr. Green, a man of observation, and famous for taking pigeons. He is also positive that two eggs and two young are often found in one nest. He says,

that the nest is built with little twigs loosely put together, and that the eggs frequently fall through, but that he is confident of observing, when only one egg could be found in the nest, that the other could be discovered to have fallen out of it." Mr. Wright, some months after this communication, informed me that subsequent inquiry had confirmed, in this respect, the accuracy of his impressions.

David Thomas, Esq. another principal engineer and a distinguished naturalist, in a letter, dated 22d of August last, says,

"I have not ascertained any particular fact relative to the young of the wild pigeon, though the common opinion is that it has two at one time."

But to remove all doubts on this question, I shall now mention an experiment successfully tried by Mr. Paul Clark, a respectable citizen of Albany.

This gentleman informs me that he has frequently seen in the woods, two eggs and two young in the nest of the wild pigeon. He has tried, for many years, to breed pigeons from those caught in the net, and has never succeeded. At last it occurred to him to vary the experiment. He took a female squab from a nest in the woods and brought it up in a cage. He put with her a male which had been taken in a net, but having been caged for three years, it was quite tame. They were placed in a wide and high coop, about which they could fly, and a small pine tree was planted in it, upon which they built a nest and bred, and their offspring, kept in a similar way, have also produced. Last year two pair began to breed in May, and continued until September. One pair produced seven, and the other eight times. Thirteen of the young survived. They laid sometimes one, but oftener two eggs for the same sitting. The confinement prevented, in Mr. Clark's opinion, a greater increase. In twenty-three days from the laying of the eggs, the young ones could fly; and in eight days from their being hatched, they are completely feathered, and fly from the nest; whereas the tame pigeon is hardly feathered in eight days, and, according to a memoir of M. Tes-

sier, to the Royal Academy of Sciences, of Paris, its period of incubation is from seventeen to twenty days. Latham, in his general Synopsis of Birds, says, that the domestic pigeon, Columba domestica, or Columba Oenas of Linnæus, has, in its wild state, not more than two broods in a year, but after being domesticated, ten or twelve. Other writers say but eight or nine.

The difference between our wild pigeon, and the tame pigeon in its wild state, is, as to productiveness, greatly in favour of the former. It breeds, it is believed, twice as often; its period of incubation is shorter; its produce the same as to number, and its young arrive sooner to maturity, and, in an unreclaimed state, it vastly transcends the pigeon of the old world in number. If Mr. Clark's experiment shall be more extensively realized, so as to secure the residence of the American pigeon in an open pigeon-house, then it will be an important addition to our domestic poultry. This is its appropriate climate, and domestication will enlarge its size, and augment its productiveness. The parent stock of the tame pigeon, and all its twenty beautiful varieties of carriers, pouts, nuns, owls, fan-tails, tumblers, &c. is the stock dove, or Columba Oenas; and this bird, in its wild state, does not exceed thirteen and a half inches in length, and twenty-two in breadth; whereas, our wild pigeon is sixteen inches in length and twenty-four in extent.* Domestication will have the same effect on the character and beauty, plumage and variety, fertility and usefulness, of our wild pigeon, as it has had on that of the old continent. According to Pliny, if you suppose two pigeons to hatch but nine times a year, they may produce, in four years, fourteen thousand six hundred and seventy young. Our pigeon, if Mr. Clark's experiment fully succeeds, will be more productive.

The tame pigeon is whimsical and fluctuating in its attach-

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* Vide Montagu's Ornithological Dictionary, and Wilson's Ornithology.

ments to home. It prefers, according to Buffon, elevated buildings, and habitations on elevated ground. Trifling circumstances will sometimes induce it to abandon its home, and it has even been known to change its partner in the most capricious manner. A person in Albany had two tame pigeons in a coop: the female was on the nest. A strange female visited the inside of the coop, and a courtship took place with the male, which was resented by the wife, who came out from her nest and made a great noise. Finding her efforts unavailing, she left her house in the course of a week, and the stranger occupied her place. What is called a *salt-eat*, which is composed of loam, old rubbish, and salt, will entice pigeons to remain where they are, and allure them from other places. Assafœtida, common salt, and a looking glass, are said to have a similar effect, and plenty of food deposited in their houses, will check their truant propensities.

Although some birds are peculiarly wild, and have never yet been domesticated, yet it may be observed, generally, that they are more tameable than quadrupeds. The latter flee from man, while the former gather round cultivation. The attainment of food is the efficient cause of this approach to the habitations of men; and, if Mr. Clark shall, by proper treatment, and a judicious application of appropriate allurements, carry his experiment to completion, as it respects permanence of residence, as well as breeding, he will be entitled to the credit of having tamed for the benefit of man, an animal more useful and productive, than its congener, the tame pigeon, which has been prized as an important acquisition since its first domestication. Columella says, that in ancient Rome, four thousand nummi, (which is upwards of one hundred and forty-three dollars,) have been given for a pair; and Pococke observes, that a pigeon-house is considered a great part of the estate of the husbandman in Egypt.

D. W. C.

ART. XII. *Brief notice of a new work on* CRUSTACEOUS ANIMALS *found in a fossil state.* By SAMUEL L. MITCHILL, M. D., Professor of Materia Medica in the University of New-York. (Read before the Lyceum of Natural History, 5th May, 1823.)

A MODERATE quarto volume was published in Paris, during 1822, under the title of the "Natural History of fossil Crustaceæ, in their zoological and geological relations." The authors are Alexander Brongniart, Professor of Mineralogy in the Faculty of sciences at Paris, &c., and Anselm-Gaëtan Desmarest, Professor of Zoology in the Royal Veterinary School at Alfort, &c. The former has turned his attention to the singular family, called *Trilobites*, the whole of which, though frequently found in a petrified condition, are believed to be now extinct, or, in other words, to be no longer alive in any part of he world. The latter has treated of the *Crustaceæ, properly so called*, such as crabs, lobsters, and the congeneric species, as found in the strata of the globe.

M. Brongniart begins his account with the *Entomolithus Paradoxus* of Linnæus. He has profited by the labours and collections of the Marquis de Drèe, of M. de France, of the Count de Bournon, in the king of France's private collection, of M. Laurillard, and of Mr. Stokes, the famous oryctologist of London. In 1815, he read before the Institute a distinct memoir on these curious productions. Since that time, Messrs. Naplenburg in Sweden, Buckland in England, and Latreille, Blainville, and Audouin, in France, have enlarged the subject by additional facts and observations. The present work is, therefore, to be considered as a new and improved edition of original dissertations. The author is conscious, notwithstanding its present extent, that it is very deficient in the requisite information to render it complete. There is certainly room for amendment in this respect. The Fredonian states, for example, are known to contain trilobites in many parts; yet so scanty is the intelligence concerning them, which has

hitherto reached Europe, that the learned author names but four specimens as coming from North America; to wit, one from Kaatskill, in the possession of Mr. Bleecker in Albany, (p. 16,) and another from Genesee, both in New-York, (p. 11); a third from Lebanon in Ohio, (p. 11,) and the last from some unknown locality, (p. 15). Of the species contained in my own museum, from the island of Anticosti, in the Gulf of St. Lawrence, from the middle region of Pennsylvania, from the maritime district of New-Jersey, and other places, exact drawings had been made in 1820, and forwarded to the administration of the royal garden and museum in Paris, by our colleague M. Milbert, one of the corresponding members. Since that time, I have despatched several characteristic trilobites from this country, for the better information of our transatlantic friends. But none of them appear to be known to the able writer of the tract under consideration. Several of the gentlemen among us, who collect minerals and fossils, possess articles of this kind, from different and distant regions, and their number is rapidly increasing. In the cabinet of this Lyceum are some; and among them, several which, from their very extraordinary structure, ought to be denominated *bilobites* as having only two lobes; such as were found near Corlears Hook, in the city of New-York; and in Orange county, on the bank of the Wallkill. The history and delineation of these pieces would make an interesting paper, and furnish materials for the supplement, which Mr. B. informs his readers it is his intention to make, as soon as his own researches and the contributions of his correspondents shall enable him so to do.

He thinks they were undoubtedly marine animals; for their constant association to rocks that are filled with other exuviæ, confessedly oceanic, leaves no uncertainty on that point. They seem to have been wonderfully prolific, since certain beds of aluminous slate and of calcareous carbonate are so filled with them, as to be composed of scarcely any thing else. They are only known in their fossil forms.

Nevertheless, the author has made a bold and apparently

successful effort to classify and arrange them. He divides them into five genera, each containing more or less species.

The 1st	genus is called	*Calymene*,	4	species.
2d	do.	*Asaphe*,	5	do.
3d	do.	*Ogygie*,	2	do.
4th	do.	*Paradoxide*,	5	do.
5th	do.	*Agnoste*,	1	do.

Besides four species of uncertain reference or disposition.

Proceeding next to the assignment of a proper place to trilobites among known and living animals, the author cites the opinions of preceding and distinguished naturalists: some of whom thought they were covered by shells of three lobes; some, that they were nearly allied to the chitons; some, to the cymathoa; some, that they were larvæ; some, that they were insects; and some again, that they were crustacea. The opinion of Cuvier is quoted, which makes them fill up the gap between the myriapodes and the crustacea; and that of Latreille, which associates them to the molluscous tribes of phyllidia and oscabrion; and after a full, formal, and patient examination, he refers them to the class crustacea, and to the order gymnobranches, or *naked gilled*, and to the section *trilobites*, where they are to stand by themselves under the five before-mentioned genera, comprehending more than twenty well ascertained species.

Having decided thus from their organization and structure, the situation they ought to occupy in zoology, the author endeavours to determine from the position or location in the earth, the relative time of their existence as living beings. In the geological view, inasmuch as not a single species of a genus, nor an individual of a species, is known to be alive, the fossil trilobites afford confirmation of the principle, "that fossil animals differ more widely from creatures actually existing, in proportion as they are enveloped in the more ancient strata of the globe." The result of this part of his investigation, is instructive: for he assigns them an era as old as the formation of transition rocks. They may be contemplated therefore as a race which lived after the formation of crystallized rocks,

and when the depositions of mineral matter, consisting of sediment, stones, and metals, jumbled together, were abundantly distributed over the surface of the earth, in the subsequent formation. It is not improbable they were entirely destroyed by the commotion or convulsion of that catastrophe.

They are found, accordingly, buried in

1. *Transition shist*, constituting the division which is properly considered as the most ancient.

2. *Transition limestone*, the next in age, of a blackish and sublamellary constitution.

3. *Other calcarious transition strata*, of a smoky or greenish gray colour, compacted fine with terebratulas.

4. *Yet other inferior calcarious depositions*, of an ash or yellowish gray, compact, and sometimes containing grains of green chlorite.

The performance is embellished with upwards of fifty figures, drawn by Meunier, and executed in fine lithographic style, by Engelman, Constans, and others.

M. Desmarest opens his work by observing, that the investigation of fossil organized bodies, has, within a few years, taken a direction so novel, and occupied a place so useful, that all the aridity, and all the sterility, with which it had heretofore been reproached, had been dissipated. After bestowing due encomium upon the labours of *Cuvier*, *Blainville*, *Lamarck*, and *Brongniart*, he observes, that fossil crustaceous animals, though presenting relics considerably numerous, are mostly detected in so imperfect a state, that they have been described and figured too vague and imperfect to satisfy the demands of natural history in the exalted rank which it now occupies. Having quoted eighteen writers, who have published their observations on these creatures, and mentioned thirteen museums from which he has derived information, (p. 71 and 72,) he remarks that, owing to the mutilation of the specimens, he has been obliged almost wholly to renounce the characters furnished by the antennæ and palpi, and to derive as much light as possible from the shell or coat, imperfect as it commonly is.

In executing his task he pays a just and merited acknowledgment to Dr. Gall, the distinguished craniologist; and, derived as it is, from a department whence it was probably the least expected, I believe it needful to explain in a summary way. This curious inquirer had entertained an opinion deduced from long and careful investigation that the human skull derived no small portion of its external configuration from the action of the brain with its vessels, and the several portions of the sensorium contained within that bony case. Crustaceous animals afford, by analogy, very strong evidence in favour of the doctrine.

For, M. D. found on examining the shells or coats of a great number of crabs, belonging to the different families described by Fabricius and the other modern entomologists, that the elevations and projections on them, however odd and irregular they appeared, were not the result of chance: on the contrary, in all the tribes of the Crustacea, the disposition of the inequalities was regular and constant, and governed by fixed and invariable laws.

Reflecting that the principal organs of these Crustacea were situated immediately under the shell or buckler, he was led to inquire whether there subsisted any marked relations between the places those viscera occupied, and the exterior irregularities. He was the more inclined to admit such correspondence, because at a certain season, all of them, after having shed their coats, are at first covered with a new soft skin, which, in a few days, hardens and acquires a solidity equal to that which preceded it. It was fair to suppose that immediately after shedding, the soft and yielding skin would be moulded, in some measure, by the internal organs, and its ossification afterwards influenced by the movements and functions of those organs respectively, or by the degree of development in each of them.

Pursuing this idea, the accurate observer traced a likeness between the buckler of a crab and the skull of a man, which, as far as it extended, afforded a luminous elucidation. In a regular investigation, he found the soft organs which modify

the outward configuration, were perfectly distinct from each other, and performed functions which were perfectly understood. He then traced anatomically the situation of these viscera, such as the stomach, genitals, heart, gills, and liver, and ascertained a constant correspondence in the various species, with the external roughness and configuration.

Passing from crabs to lobsters, he discovered in the latter similar indications, quite as striking and strong, and found them remarkably serviceable, by their distinctness and regularity, in determining the resemblances and dissimilitudes between the fossil and the living species.

His classification is made with consummate skill, in the following manner, to wit:

ORDER I.

Decapodal Crustacea.

Family 1.

Brachyural or short-tailed Decapodes.

Section 1.

Swimmers.

Genus 1. Portunus—2 species.

Genus 2. Podophthalmus—1 species.

Section 2.

Arched Crabs.

Genus 3. Cancer—6 species.

Section 3.

Genus 4. Grapsus—1 species.

Genus 5. Gonoplax—5 species.

Genus 6. Gelasima—1 species.

Genus 7. Gecarcinus—1 species.

Section 4.

Orbicular Crabs.

Genus 8. Atelecyclus—1 species.

Genus 9. Leucosia—3 species.

Section 5.

Triangular Crabs.

Genus 10. Inachus—1 species.

Section 6.

Notopodal Crabs.

Genus 11. Dorippa—1 species.

Genus 12. Ranina—1 species.

Family 2.

Macroural or long-tailed Decapodes.

Genus 1. Pagurus—1 species.

Genus 2. Eryon—1 species.

Genus 3. Scyllarus—1 species.

Genus 4. Palinurus—2 species.

Genus 5. Palemon—1 species.

ORDER H.

Isopodal Crustacea.

Genus Sphœroma, as is supposed, the specimens being very imperfect, - - 2 species.

ORDER III.

Branchiapodal Crustacea.

Section 1.

Pœcilopal Branchiopodes.

Genus 1. Limulus—1 species.

Section 2.

Lophyrophal Branchiopodes.

Genus 1. Cypris—1 species.

This memoir, memorable throughout for the indications with which it abounds of the researches of the author, by the aid of books and specimens, is illustrated by seven plates, containing more than sixty figures executed from nature.

REVIEW.

ART. I. *An Essay concerning* TUSSIS CONVULSIVA, *or* WHOOPING COUGH, *with observations on the Diseases of Children.* By BENJAMIN WATERHOUSE, M. D., &c. Boston, 1822. pp. 152.

PERTUSSIS, or whooping cough, is one of those diseases which have received attention in an inverse ratio to the importance of their character, and the frequency of their occurrence. The mild form under which it in general makes its appearance, and the rare fatality that in the present day, at least, attends it, account in part for this neglect. But an examination of the annual bills of mortality, for the several cities of the Union, will show, that if whooping cough slay not its thousands, it does nevertheless contribute no insignificant share to the catalogue of mortal diseases. Thus, it appears, that, during the last year, there died of this disease in New-York, thirty-five persons; in Philadelphia, thirty-eight; in Baltimore, seventeen; and in Boston, five: and in the year immediately preceding, the number of deaths from the same cause, amounted in New-York, to ninety-two; in Philadelphia, to thirty-six; in Baltimore, to twenty-eight; and in Boston, to twenty-six: making a total of two hundred and seventy-seven for the two years. This list is not a very extensive one; but it might, in our opinion, be very materially diminished, if popular anxiety was properly awakened to the subject, and professional knowledge rendered more extensive and applicable to the emergencies of individual cases. We firmly believe, that to inattention and improper treatment may be im-

puted two-thirds of the cases of whooping cough which prove fatal, and that it therefore becomes the imperative duty of those to whom the lives of persons affected by this complaint are intrusted, to bestow more consideration on the subject than popular prejudice has hitherto permitted it to receive.

Entertaining these views of the importance of the disease, which forms the subject of the book before us, we were not a little pleased to see it taken into consideration by one of the veterans in the medical history of our country. Dr. Benjamin Waterhouse has long been advantageously known to the American public, as the first person who performed the inoculation for the kine pox in this country. Comparatively insignificant as this operation may have now become by its long and daily use, it was at the time Dr. W. first performed it, fraught with consequences the most important to the public weal, and justly excited more general interest than an operation for taking up an artery near to the heart, or others equally bold and novel, would be thought worthy of at the present day. Besides several valuable treatises on this subject, Dr. Waterhouse published others of a more general nature, and was for a long time professor of theory and practice of physic in the University of Cambridge. He must have accordingly enjoyed advantages of no ordinary nature, and came recommended to his readers with no mean qualifications for experience and knowledge. We are afraid that the expectations, which would in consequence be formed of the character of the present work, are doomed to receive a grievous disappointment; and that any expressions short of this feeling must be attributed to the good nature of a public grateful for the past, rather than to any strict discharge of judgment over the performance of the present. For ourselves, we confess that we did anticipate a treatise that should combine, with a comprehensive view of the disease in general, such practical illustrations as must have been furnished to the author by his long experience, assisted by that of his contemporaries; and more especially a treatise that would have given us a faithful and ample account of this

interesting disorder, as it has displayed itself in our own country. In none of these respects, however, have we been gratified; the author appearing to us anxious on all occasions to display his knowledge of foreign works relating to every other subject, rather than to the one immediately before him. Thus he cannot speak of any part of the body, be it concerned in the disease or not, but he must forthwith abstract or copy, from his anatomical text book, every thing relating to its anatomy and physiology. Now, independently of the pedantry which attaches to this, it serves to confuse the reader, and waste, in grave trifles, that time which should have been more usefully employed in the discussion of the disease professedly the subject of consideration. Under a chapter dedicated to the breathing and vocal organs, which might have been with far more propriety altogether omitted, we are treated with a minute description of the teeth and their diseases, continued for several pages. Perhaps the reader will wonder, and surmise where could possibly be the connexion between such an anatomical treatise on the teeth and the whooping cough. We cannot inform him further, than that the mention of sympathy leads to an illustration of its effects in this most minute and tedious digression. It would be painful to adduce further proofs of the same tendency to *error loci* in the present book; but what will be the exclamation of the reader, when under the head, "Dissections, and the appearances of diseased bodies," he finds himself involved in the mystic inquiry, "What is life!" We had believed likewise, that as Dr. Waterhouse has long been engaged in writing, besides having been for many years a professor, that we should have met with no uninstructive model for the imitation of the youthful members of our literary republic; at least that we should not have been offended by any gross errors, or have again seen the long aspersed character of our country exposed to contumely and abuse. But we fear that the present work, should it fall into the hands of the invidious foreigner, will prove too favourable an opportunity for the indulgence of sarcasm and ridicule, to be passed over in silence. We therefore protest in anticipation

against any general application of such weapons, that should be directed solely against the guilty individual, not the innocent partners of his name and country. Anxious for ourselves, and resting on the judicial maxim that mercy to the criminal is cruelty to the public, we proceed to convict Dr. Waterhouse as guilty of the most awkward, inelegant, and frequently incomprehensible language we ever remember to have met with in any book, American or English, Hebrew or Chinese. How can Dr. Waterhouse defend the use of a singular verb with the plural noun lungs: as, the "lungs expires," and "inspires;" the "lungs is DIGESTING *air*"? What is the meaning of such distinctions as are conveyed in the expression, "animating the whole system *corporal* and *corporeal*"? p. 47. or of the doubt conveyed in the sentence, "Through another opening in the diaphragm, passes the œsophagus; whether ascending or descending we know not." p. 52. Are Fyfe, and Bell, and Monro, implicated in this confession of ignorance? We are too blind, perhaps, to perceive any elegance in such sentences as these—"good sense has not fair play when enveloped in a cloud of technical terms. Too many books of anatomy have more husks than kernel; more shell than meat." p. 49. We doubt not but that the following paragraph will be considered by some literary wag as a choice specimen of verbose and unmeaning amplification:

"The bronchial artery and vein are simply sanguiferous vessels, merely subservient to the lungs as a viscus, to nourish and sustain the respiratory apparatus, devoted entirely to its nutrition, incessant mutation, and as perpetual renovation, and restricted to the ordinary actions of simple life; where nothing else is called for than sustentation, mutation, and alternate growth." p. 73.

We have neither room nor inclination for more such extracts; but we should like to know in what mint the words "positivity," "respirating," were coined. The following expression, we know not whether to admire for its elegant and delicate allusion, or for its novelty: "a doctrine revived and *clarified* by Charles Bell." p. 88.

We shall now take up the subject matter of Dr. W.'s book, and first the history of whooping cough. Dr. Waterhouse labours under a great mistake in supposing that Willis was the first to describe this disease. The reviewer of Watt on Chincough, in the first volume of the Philadelphia Journal of the Medical and Physical Sciences, has fallen into the same error. This affection was noticed as early as the beginning of the sixteenth century. It prevailed to some extent in France in 1510, and was then called *La Coqueluche*, either from *cucullio*, a traveller's hood, because patients covered their heads with some such cap; or from *coquelicot*, the name of a plant from which a syrup was prepared and applied with great advantage to the cure of the complaint. The disease was described as marked by the peculiar sound which still distinguishes it; as being contagious, and frequently accompanied with fever. Bleeding and purges were denounced, and sudorifics and the bol. armen. mainly relied on. Coyttarus and Pasquier likewise describe this disease as it prevailed in Germany in 1557, and named by the inhabitants Hühneweh, or chicken disease, because the peculiar sound attending it was thought to resemble the noise made by that animal. General bleeding was here likewise forbidden, but the raninal veins were opened with advantage. The disease was in general confined to infants; but Crato relates cases from which it appears that even old men were not exempted from an attack.* We cannot sufficiently regret that while Dr. Waterhouse has attempted to be particular in giving us the history of the disease in other countries, he should have satisfied himself with the following paragraph, as containing all the information he could collect relative to the disease in his own country: "Many children died last year (1821) in the New-England and in some of the Southern states, of whooping cough. The exact number cannot be ascertained, as the bills of mortality are not yet kept in all our cities and towns with the same precision as in England." p. 19.

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* Sprengel, Histoire de la Medicine, vol. iij. p. 75.

We next come to the symptoms of whooping cough: and as Dr. Waterhouse has himself been the subject of the disease within the last eighteen months, it affords additional interest to his description. His case is the more curious, as Dr. W. was "past three score years of age," and compared symptoms with several old friends who were similarly affected.

"To a by-stander the disorder appears to come on with the ordinary symptoms of catarrh; but to the attentive adult patient, its approach is intimated by an universal soreness of the flesh, especially of the abdomen, not unlike the symptoms of an incipient peritonitis. This tenderness extends from the insertion of the diaphragm, in the xiphoid cartilage of the sternum, to the pubes and groins; and is accompanied with a sense of weariness, especially in the loins, together with an uneasiness, stricture, or sense of twisting in, *we presume*, the upper orifice of the stomach."

We cannot pass over this account of the invasion of the disease without a remark. Dr. Waterhouse is the only writer, as far as our researches enable us to judge, who takes notice of the soreness of the abdomen in the incipient stage of the complaint. Now, although it might be suspected, that his theory might have led him to refer his pain to this particular part, or to enhance its degree, we cannot and will not demur against the truth of his statement. But we must condemn the *presumption* of which the Doctor is confessedly guilty in the last clause. When taken in connexion with what follows, it will be found too bare and undisguised a begging of the question. To proceed:

"In some, if not in all, there is a sense of heat in the direction of the ureters, and somewhere about the bladder. During the soreness of the flesh, which lasts three or four days; there is a short, hacking, husky effort, hardly amounting to a cough. It seems a peculiar affection of the œsophagus, or pharynx; and this cough to be an instinctive effort to [get] rid [of] or diminish this slight but disagreeable feeling. As yet there is no soreness, or painful affection of the chest, nor sense of stuffing, as in catarrh;

nor remarkable difficulty of breathing, neither any sensation of membranous tightness during the action of coughing; nor tender spot in any part above the diaphragm. The tenderest place is the rim of the belly and in the groins. In an advanced state of the disorder, the pain and distention is [are] so great in the groin, as to excite in some apprehensions of rupture, during the violent convulsive paroxysms."

"On the appearance of symptoms resembling catarrh, the soreness of the abdomen gradually lessens, and the characteristic symptom of this distemper begins moderately to manifest itself. I mean the *convulsive hiccuppish cough.*" p. 22.

The author proceeds to notice the general presence of fever, headache, somnolency, coldness of the extremities, variable appetite, high coloured and spare urine, costiveness, and hot skin. The peculiar symptoms of the disease, "a singular retch, catch, hiccup, or cough, accompanied with a sort of half crowing sound, denominated a *whoop*," do not, in general, come on till the twentieth day. The disorder is now considered to be formed, and the convulsions to have '*taken their stand*,' in order to recur three or four times a day. Dr. Waterhouse considers the fit, which occurs at two o'clock at night, or after the first "nap," the most violent of all. The fits are excited by many causes, as surprise, and other affections of the mind, eating dry biscuit, wine, or quick running. Such fits are particularly violent in the plethoric and robust; the face swells and becomes livid, the eyes start from their orbits and inflame, and there is danger of suffocation. Adults sometimes fall down of a sudden, as if struck with apoplexy. Dr. Waterhouse asks, where the strangulation threatens to be fatal, if "the smart stroke of a whip, on some sensible part, might not prevent the event?" p. 24. This reminds us of a practitioner in this city, who being called to a child who had a large bean in its glottis, impeding respiration, satisfied himself with coolly patting the gasping sufferer on the back, till neither patting, nor any more judicious means could have availed. The fits generally go off after a very copious discharge of clear lymph, and leave the patient in the most perfect

ease. Dr. Waterhouse properly thinks that the redness and urgescence of the face and the inflamed eyes are merely the effects of the convulsions. A contrary opinion has lately been advanced by Dr. Webster, in the London Medical and Physical Journal, who argues from the presence of these symptoms, that "the actual seat of the complaint may be in the head, and that the affection of the respiration is only to be considered as a secondary effect, or as an effort of nature to relieve herself by expanding the lungs to an unusual degree, thereby allowing a greater quantity of blood to flow into them, which may, in some degree, diminish the fulness and congestion now spoken of."* Plausible as this theory is, how does it account for the absence of those symptoms of cephalic congestion during the interval between the paroxysms of coughing, and reversely, for the want of such relief through the medium of the lungs, in cases of confessedly cephalic disease? But not only are these symptoms of congestion in the head temporary, and cease with the paroxysm, but they are by no means always present, and they may be relieved by appropriate treatment, while the disease which gave occasion to their presence still remains. Of this we have had indubitable proof, and can say with Watt,

"Quæque ipse miserrima vidi."

But dissections have *occasionally* discovered evident marks of the congestion of the head, and bleeding from the jugular vein has been found very serviceable. These are, however, but equivocal marks and proofs of the primary seat of a disease. According to this, the seat of the disease might occasionally be found even in the liver, in the intestines, and in other important viscera. At the most, they merely prove that the affection of the head is frequently an attendant upon this disease; a circumstance not at all to be wondered at, as

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* Webster on Hooping Cough, in the London Medical and Physical Journal.

it frequently accompanies many other affections of the pulmonary organs.

We have not been able to ascertain precisely what are Dr. Waterhouse's peculiar views with regard to the seat of this disease. He has enveloped his inquiry in such a cloud of general speculations and anatomical description of the external skin (!) the internal skin, and the membranes, and the diaphragm, &c. that it requires the industry and minute vision of a bee, to abstract the useful from the superfluous, or, to use the author's own expressive and significant language, to separate "the meat from the shell." We shall, however, leave the author to speak for himself:

"If we cannot fix precisely on the muscular part, which is primarily affected in this distemper, there can be no doubt as to the *membranaceous part of us.* We are certain that its seat is in that delicate and very irritable *internal* skin, denominated the MUCOUS MEMBRANE, which lines all the passages from the eyes, nose, ears, mouth, and throat, downwards, including all the emunctories, outlets, and inlets of the body."

The author then goes on to describe the mucous membrane; appropriating a page by the way to the external skin. Dr. Waterhouse is inclined to attribute the origin of the doctrine of mucous membranes to Fordyce and Hunter, because "from 'the symptoms of irritation,' of the former, and the inflamed mucous membrane 'teazing the constitution into an hectic,' of the latter, he discovered the first glimmering of that light which is now penetrating the dark recesses of the animal economy." We do not mean to detract from the merits of the great English physicians quoted by the author, but "if," using the words of Malpighi, "in arts and sciences he is properly to be deemed the discoverer, who, by a proper investigation, unravels Nature's perplexities, and calls in reason and experience to support, and facts to confirm," then are the French authors Bordeu, Pinel, and 'the greatest is behind,'—Bichat, to be deemed the founders of the doctrine relating to the "tissu muqueux."

Our author believes that on this mucous membrane, thus constituted, endowed and governed by the general laws of life, &c. the specific contagion of whooping cough first seizes and operates.

"The parts first attacked appear to be extra thoracic; and we have reason for believing they are that portion of the mucous membrane which covers the upper part of the alimentary canal, including the pharynx, œsophagus, and that entrance of the stomach called cardia. It thence extends to the diaphragm one way; and to the larynx, trachea, and air vessels of the lungs, in extreme cases, another; but in most cases the lungs are affected by consent or sympathy; and not organically, until the disease has changed into a chronic distemper." p. 41.

Dr. Waterhouse relates the following experiment made to determine the source of the colourless phlegm in whooping cough:—Several large pills of liquorice were swallowed by a careful experimenter; after a sufficient length of time, coughing was provoked, and the paroxysm of whooping followed, at the end of which the phlegm ejected was found tinged with dissolved liquorice, proving, in Dr. W.'s opinion, that it came entirely through the œsophagus, and not through the windpipe. This experiment is, to say the least, very fallacious; and would equally prove pneumonia to reside in the œsophagus.

We cannot follow the author in his long and desultory search after the primary seat of the disease. After descanting on the importance of the diaphragm, its structure, and the consent between this "grand organ," the "nobilissimus, port cor, musculus," of Haller, and the cardiac orifice of the stomach, he concludes by seeing no reason to disbelieve that the diaphragm may be operated on by a specific contagion, and is finally the ultimate seat of whooping cough. Dr. Waterhouse adduces hiccup in illustration of his theory, and from the resemblance between the peculiar clang or sonorous whoop and hiccup, which is referred to the diaphragm, and likewise

from his personal sensations, he concludes there can be no doubt whatever remaining as to the diaphragmatic nature of this disease.

Turning to the chapter which treats of dissections, we find nothing on this subject which is the result of the author's personal observations, which we have much cause to regret in a work of this kind. We cannot approve of the method the author has here pursued of relating those few cases only from other writers, in which the abdominal viscera were found diseased. We have already seen how unsatisfactory and inconclusive are such occasional occurrences. Less can we admire the conclusion which the author draws from the assumption, that the abdominal viscera (having not been sufficiently attended to in the examination of the dead body) had *probably* in these cases borne the weight of the disorder. We say assumption, because we find that they have in general been examined; and in those cases where they have not, it has been because the seat of the disorder was discoverable without such examination. Surely Dr. Waterhouse would not have the body of a person who died with phrenitis, for example, examined to his very toes. This would indeed realize the desire of a certain physician we have known, who wished to commence an examination of the dead body of his patient by dissecting his entire skin! To be serious: we think that the observations of Watt, in England, and of Gamage, in this country,* render it sufficiently clear that the whooping cough principally affects the mucous membrane of the trachea and bronchia. Dissections after death have most frequently evinced marks of lesion in this membrane, and as we already had occasion to remark, where other parts have been found affected, they must have suffered secondarily, either from sympathy with the primarily diseased part, or from some mechanical action induced during a violent paroxysm, or perhaps from an inexplicable metastasis.

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* New-England Journal of Medicine and Surgery, for July, 1817, vol. vi.

When we saw a chapter to which the title "Epidemics" was prefixed, we felt our hopes revive, that we should have something relating to the whooping cough as it has prevailed in its epidemic forms in this country. But those hopes were like our first, and shared the same fate—

> "Like Dead sea fruits, that tempt the eyes,
> But turn to ashes on the lips."

We glanced, however, on one contradiction in this chapter, which it may be worth our while to notice to the learned author: he denies the propriety, in page 62, of meddling with causes so remote as the influence of comets and meteors, and the 'epidemic constitutions' of the illustrious Sydenham, saying, "that our knowledge of nature is too limited for speculative positivity"! yet, in page 66, he is not disposed to deride the opinion that man is influenced by the planets, the "various aspects of the sun and moon, their accessions, recessions, perpendicular or oblique irradiations, conjunctions and oppositions, and their effects through the medium of the atmosphere!" The names of Boerhaave and Mead, who favoured the idea of a planetary influence, and the opinions of "some philosophical physicians, with minds highly cultivated, and well acquainted with the general laws of the *cosmos* and also of the *microcosmos*," and a little of the "philosophy of common sense," have evidently led Dr. W. to this very innocent and impalpable contradiction.

The treatment of the disease is, in every respect, interesting, and must tend to throw light on the true nature of the proximate cause. Judging from the general success which has attended the plan of Willis, who, on this account at least, deserves praise, and who employed bleeding, vomiting, purging, and blistering, we are confirmed in an opinion that the disease is of an inflammatory character. The same method was pursued by Sydenham, Huxham, and Lettsom, in England, and has likewise been followed up in this country with great success. Dr. Gamage, to whom we have already referred, observes of bloodletting more particularly, that "a timid use of this remedy is to be deprecated. It often happens, that a first

bleeding effects no apparent improvement in the state of the disease, when a second, or a third, would completely accomplish the object. If abandoned after a single trial, the patient loses the best means of relief; the remedy is brought into discredit, and has laid to its charge many of the evils, really the effects of the disease. If employed in the last stage it will do no good, and will thus get into direpute, if not with physicians, certainly with the lookers on. I am persuaded," concludes this able writer, "that in most instances of its failure to relieve the disease, and I might, perhaps, add other acute diseases, it is to be attributed to its being resorted to too late, or used too sparingly." Dr. Waterhouse attributes the useful effects of cantharides to counter irritation, on "that irritable point in the internal surface of the bladder, mentioned by that eminent anatomist Charles Bell, directly over the junction of the muscles of the ureters, with the internal sphincter of the bladder; the point, which when inflamed, provokes an incessant call to make water." This *point* being irritated 'relieves the œsophagus, diaphragm, *larynx!* and upper orifice of the stomach.' We are far from calling in question the principle of counter irritation produced by blisters, but we must very much doubt whether the production of strangury, for it is this affection which is referred to by our author in his periphrasis just quoted, is always likely to relieve the primary disorder. It is certainly avoided in general, on account of the great inconvenience it occasions, and we even doubt whether it has not a tendency to detract from the beneficial operation of the cantharides on the part primarily affected. Sympathy is still too much relied on by the American schools, as the universal solvent of theoretical difficulty. In this respect we are glad to see a reform progressing and displaying its wholesome effects in the later European publications. Medical mind should no longer be trammeled in any exclusive doctrine, humoral or solid, but embrace with nature, every part of the human frame as equally subjected to the same principles of life, and health, and disease.

We have only room to notice the concluding chapter of Dr. Waterhouse on a very important subject; the power of vacci-

nation in removing or mitigating whooping cough. We believe, though Dr. W. does not accredit him for it, that Dr. John Archer, of Maryland, was one of the first, if not the first, who noticed this subject, in a letter to Dr. Mitchill, dated November 15, 1818. This letter will be found in the twelfth volume of the Medical Repository of New-York. Dr. Archer therein states, that the vaccination proved successful in every case of whooping cough in which it was performed, and that the termination of the one disease proved likewise the end of the other. Dr. W. does not seem to place any very great reliance on the remedy, but does not, however, relinquish the idea that "the variolous, as well as the vaccine fever, diminishes greatly, and sometimes entirely obliterates the symptoms of the epidemic convulsive cough." p. 147.

We have now closed with our long and somewhat painful criticism on the book of Dr. Waterhouse. We have been severe, but not unnecessarily so. If the former services, and the age of Dr. Waterhouse, claim respect, his faults should be proportionally noticed, lest, resting on the weight of his authority, they pass current with the undiscerning and inexperienced.

ART. II. *A Dictionary of* PRACTICAL SURGERY, *&c.* By SAMUEL COOPER, Member of the Royal College of Surgeons, London, &c. &c.; with Notes and an Appendix, by WILLIAM ANDERSON, of the College of Surgeons of Edinburgh, Professor of Anatomy to the Vermont Academy of Medicine, and Lecturer on Surgical Anatomy in New-York. From the 4th London ed. New-York, 1822, 2 vols.

The FIRST LINES *of the* PRACTICE OF SURGERY, *&c. &c.* By SAMUEL COOPER, Member of the Royal College of Surgeons, London, &c.; with Notes, by ALEXANDER H. STEVENS, M. D. Surgeon of the New-York Hospital, &c. &c. From the 4th London ed. New-York, 1822, 2 vols.

As the review of foreign works does not enter into the plan of our Journal, we shall not detain our readers by any exa-

mination of the surgical writings of Mr. Samuel Cooper. We cannot, however, refrain from expressing our gratification on seeing them again reprinted in this country in a new and improved shape. They have long since received the seal of professional approbation both in Europe and in this country; and we believe they are at present universally esteemed as the most valuable productions of the kind which have as yet been offered to the public. To the reprints just published in this country several additions have been made by the American editors. It is to a notice of these that we purpose to confine ourselves, and we do this the more willingly, because they relate in a great measure to the improvements which have been made in surgical knowledge in our own country.

The "Dictionary of Practical Surgery," is edited by Mr. Anderson, a gentleman to whom we have already had occasion to pay our respects, as the author of an elaborate work on surgical anatomy. We then ventured to express an opinion, that however Mr. A. might be respectable as an anatomist, he certainly could make no pretensions whatever to the character of a good writer. Intended as our strictures really were for his benefit, we did cherish the hope that they might not be entirely lost upon our author. We regret to find, however, that in this reasonable expectation we have been completely disappointed. In no respect do we find him at all improved. His present performance is disfigured by the same violations of good taste, and the same ignorance of the English language, which disgraced his Surgical Anatomy, and which have furnished the English reviewers with another fine opportunity of sneering at American literature.* We believe

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* In a recent English review of the work on Surgical Anatomy, we find the following very charitable apology offered for Mr. Anderson. "Some forms of expression in the work before us, we confess, sounded rather strangely in our ears; but we believe them to be not peculiar to Mr. Anderson alone, but to the whole of our transatlantic brethren." Johnson's Med. Chir. Review, No. x. p. 375.

The reviewer probably was not aware, when he cast this fling at his

we shall abundantly verify this assertion in the quotations which we shall make in the course of our observations.

Mr. Anderson seems to have thought some apology necessary on his part, for adding an appendix to the work of Mr. Cooper, and accordingly favours us with his reasons for the undertaking in the following *spirited* paragraphs, which we find in his preface.

"It may nevertheless be asked, why the necessity of an Appendix? In answering this, the editor will not plead a custom in the country; but *allege*, that upon a close perusal of this edition, he has discovered with surprise, an entire omission of some brilliant surgical achievements, that have their *origin* on this side the Atlantic. These having been long ago before the public, he is unable to explain why their record has escaped the author's eye. The expediency of their having a place in a book of this nature, he offers, therefore, as one *excuse* for the appearance of the appendix.

"Another *motive*, not less *specious*, is founded upon the propriety of giving information of some new surgical operations that have been performed in this country with success, but which have *occurred* so recently, that any notices respecting them could not have reached our author in time to have had them inserted.

"And lastly, as there have been lately presented to the public some *new* ideas relating to the anatomical structure of the pelvis, which are [it is] supposed will influence the method of operating in lithotomy; the editor ventures to place them in an Appendix, by way of making more known what he considers of the *highest importance* in this department of operative surgery."—Advertisement of American editor, vol. i. p. 3.

When it is remembered that the "new ideas," here spoken of, are the distillations of Mr. A.'s own prolific brain, we are at a loss which most to admire, his candour or his modesty, in pronouncing them to be of "the highest importance."

Notwithstanding the opinion which we have expressed con-

"transatlantic brethren," that Mr. Anderson was one of his own "brethren." This country lays no claim to the honour either of Mr. A.'s birth or education.

cerning Mr. Anderson's merits as a writer, we are happy to admit that the Appendix contains several articles of valuable and interesting matter. Scarcely a single one of these, however, is from the pen of Mr. Anderson. They are obtained almost entirely from the writings and practice of Dr. Mott, of whose surgical talents Mr. A. seems to entertain a very exalted opinion.

It certainly cannot be expected that we should enter upon a critical examination of every article contained in the Appendix. We shall, however, notice a few of the more important to illustrate the general character of the performance.

Anastomosis. Under this head is given an account of the circulation by anastomosis in the head and neck of a patient, who died between four and five months after the right carotid had been successfully tied, for the removal of a large carcinomatous fungus. The dissection was made by Dr. Mott, and the paper was originally published in the Hospital Register. We believe it to be the only history of the kind upon record, and is on this account peculiarly interesting.

False joints, or ununited fractures. Mr. Anderson thinks that "there is something yet to be learnt on this subject, as to the rationale of the operation of setons, sawing off the ends of bones, &c. as means producing cure in this form of disease." He then proceeds to enlighten us on this subject, in the following strain.

"I will *contend*, that, when a want of union exists between the broken extremities of a bone in any part of the body, owing to a deficiency in the constitution to form osseous matter; that taking out the ends of the bone, and sawing them off, saying nothing of the formidable nature of such an operation, or *serving* the ends of the bone with caustic potash, is more calculated to confirm such *deficiency*, than to renovate the constitution. I need not explain why; for a knowledge of the laws of the animal economy will answer for me. Also, how keeping up a puriform discharge for ten or twelve months, through means of a seton, from a limb under such circumstances of constitution, will lead the vessels of the broken ends of the bone to an osseous deposit, is to me inex-

plicable; and I will affirm, that no conclusive evidence that it is so can be drawn from any of the cases on record, where a cure has taken place.

"When means then, applied to the part, have beneficial tendency, (I *intend* the means hitherto made use of,) they must have influence upon some local cause preventing union. To be brief, for my limits oblige me, I will *assume*, that an insulated or loose splinter of bone, void of periosteum, acting as an extraneous body in the wound, is the *only local* cause which is preventing union, and producing a hinge joint."—Vol. i. p. 697.

After this strange and almost unintelligible jargon, our author proceeds to inform us, that setons, &c. operate in promoting the union of fractured bones, simply by removing the little spiculæ between the fractured ends, and which he considers as the only "local cause" preventing their union. Profound as Mr. Anderson usually is in his views, we cannot but wonder how he should have involved himself in so palpable an absurdity as there is contained in all this. The *only cause* preventing a union of the bones, according to him is the presence of these extraneous spiculæ, and yet he gravely contends, that by introducing another extraneous body, viz. a seton, and keeping it there for days and weeks and months, the union of the bones is actually promoted. Let us reduce Mr. A.'s reasoning into a syllogism. It will then stand thus:

In false joints, extraneous bodies between the ends of the bones prevent the union of the bones.

A seton introduced between the ends of the bones is such an extraneous body.

Ergo, a seton promotes the union of the bones.

Divested of its unmeaning verbiage, this is a fair analysis of Mr. A.'s reasoning, and it shows at once the absurdity of his theory as to the modus operandi of setons, &c.

A little further on, our author gives us another precious morsel.

"I have observed," says he, "and I believe it is the fact, that the seton is of more doubtful success in cases of hinge joint of the humerus, than even of the femur, or either of the bones of the

lower extremity; and *I am satisfied with this explanation*, why it is so, viz. that the patient will keep his bed, no doubt, when the seton is in the thigh or leg, by which the spiculæ will find a more ready escape; but when in the upper arm, the course of the seton may not be such as to *invite* the spiculæ outwardly; especially when the patient walks about with his arm in a sling."—P. 698.

Mr. A. may be perfectly "satisfied with this explanation," but we doubt whether any body else will; that is, upon the principle which Mr. A. has assumed with regard to the operation of setons. If they act merely, as he would make us believe, by removing the extraneous matter in the joint, then we should suppose that the greater the motion and friction of the seton between the ends of the bones, the more likely would it be to produce the desired effect. How upon this principle, the perfect and motionless rest of a limb can favour the "more ready escape of spiculæ," we confess ourselves at a loss to determine.

Our author concludes his article on false joints with the following finely turned sentence.

"I hope the stimulus of necessity, or some other *cogency*, will soon direct to a decision in favour of a true pathology for this disease."—P. 700.

We have dwelt the longer upon this article, because the subject itself is extremely interesting, and because we were led to believe, from our author's sounding exordium, that he had something of mighty import to communicate. We need not say how much we have been deceived. All his notions, (we will not call them ideas,) are at open war with common sense and daily observation. As to loose spiculæ of bone being the only cause of false joints, it is an hypothesis not merely gratuitous, but contradicted by notorious and well authenticated facts; and with regard to the theory of setons, he has merely enveloped in the fogs of his own brain a subject perfectly plain and intelligible to the commonest capacity.

Injuries of the head. We look upon this article as one of the most valuable in the whole appendix. It promulgates a very important improvement in the after treatment of injuries

of the head; the credit of which we believe to be entirely due to the late Dr. Richard S. Kissam, of this city, who, for soundness of judgment and practical skill, has not left his superior among us. The improvement which we refer to, is that of suffering a long interval to elapse between the first and second dressings, after operations or wounds of the cranium or scalp. Cases illustrating this mode of treatment are related from the practice of Dr. Mott, in which the dressings were not changed until the fifteenth and sixteenth day, and the patients uniformly did well. Mr. Anderson states the advantages of this practice in the following terms.

"It does appear to me, that these parts, and especially those within the cranium, are induced to accommodate themselves to the pressure of the first dressing; and that, by it, the inflammation, supervening to the injury, is moderated and regulated. But when the dressings are removed daily, there is as often a re-action in the vessels set up, under which they often receive more blood for a time, which becomes a new excitant to inflammatory action. The delay between first and second dressings, after the operation of the trepan, is, no doubt, of decided advantage, and from this cause, by preventing an excess of inflammation in the vessels of the pia mater." p. 702.

Hydrophobia. Mr. Anderson commences his article on this interesting subject, in a manner peculiarly elegant and characteristic.

"Our author, (Mr. Cooper.) after a most laborious research into the annals of surgery, in order to ascertain the pathology of this disease, and without being able to decide upon any of the *at present* promulgated opinions, is constrained, *being in doubt*, at length to ask, 'Does the infectious principle of rabies reside in the salivary secretion, or in the mucus of the trachea and bronchia?' and immediately adds, 'the common belief is, that, in hydrophobia, the salivary glands are considerably affected.' By this is shown, that notwithstanding the mystery in which the pathology of this disease is involved, the mind of the inquirer has been led to the *site* of the salivary organs, to search for a cause which he declares himself satisfied existed in no other situation." vol. ii. p. 691.

We are then favoured with the whole of Dr. Marrochetti's paper, an analysis of which appeared in our first number, and of which, therefore, we shall say nothing at present. Immediately after this, we are treated with a letter from a "gentleman of observation and experience in New-Jersey," which Mr. Anderson tells us "when read, will be found in *affinity* with the preceding."

Lithotomy. Mr. A. here gives us some of those "new ideas", of which he speaks in his preface, and which he declares to be of the "very highest importance." They are the same which are contained in his Surgical Anatomy; an account of which may be found in our second number.

We are not disposed to follow Mr. A. any further in his lucubrations. If it should be thought that we have used any unnecessary severity in our remarks upon Mr. A. we can only plead an honest conviction of what we believed to be an imperative duty. Mr. A. may rest assured, that, as it regards himself, we cherish not a single feeling of hostility; and, could we flatter ourselves, that by any thing we may have said, we shall be able to deter him from again prematurely throwing himself as an author before the public, we conceive that we shall have performed towards him an act of the sincerest kindness.

Of the notes to Mr. Cooper's "First Lines of Surgery," by Dr. Stevens, our notice must necessarily be short. We are told by Dr. Stevens that "in revising this work, at the request of the American publisher, I have noticed a few of the suggestions of Mr. Cooper, which were not accordant to the views of some of the best authorities in Surgery; and where it appeared to be necessary, I have cited passages from authors of acknowledged merit, in support of the opinions he has advanced. Mr. Cooper has omitted some subjects which I have ventured to supply; for instance, lithotomy in the female; in which I have stated M. Dubois's new operation, by cutting towards the symphisis pubis; the treatment after the operation for hernia and lithotomy, irritable tumour of the mamma

fissure of the anus, amputation at the wrist," &c.—*Notice to the American edition*, vol. i. p. 4.

All this, we think, Dr. Stevens has performed in a manner quite satisfactory, besides adding several judicious and instructive notes upon other points. To the American student this edition is certainly preferable to the English, and we, therefore, cheerfully recommend it to general patronage.

Medical and Philosophical Intelligence.

DOMESTIC.

Medical Society of the State of New-York.—In the transactions of this Society, at their annual session for 1823, which we have lately received, we find an important opinion expressed, concerning the term of study required previous to licensure in medicine. As the subject is one of general interest to the profession at large, we deem it our duty to give it a place in our Journal.

"Whereas information has been given to this Society, that the censors of a certain County Society of this state, have construed the laws, regulating the practice of Physic and Surgery, in such a manner as materially to abridge the term of study of candidates for licence: therefore

"Resolved, That, in the opinion of this Society, the term of four years study admits of no reduction on account of any vacations which are usually allowed in Colleges and Academies—that the law requires that four complete years should be devoted exclusively to the study of Physic and Surgery, unless the candidate produce written testimony that he has attended at least one year to the study of the Latin or Greek Languages, or both, or that he has attended a complete course of medical lectures at some public institution, either of which shall be taken in lieu of one year's stu-

dy—and that in no case shall any candidate be examined, who has not studied three complete years, exclusive of all classical studies, or attendance on medical lectures as above stated."

Believing, as we do, that the existing law of the State is eminently calculated to elevate the character of the profession, and concurring in the exposition here given of its provisions, we do hope, most sincerely, that they may be carried into complete and efficient operation.

Extract of a letter to the Editors, from Dr. T. SUTHERLAND, *dated New-York, June* 1, 1823.

Case of enlarged stomach.—Mr. Seth Keeler, of Durham, Greene county, N. Y., 22 years of age, of a slender constitution, and spare habit, early in the year 1819, received, by a fall upon the forepart of a saddle, an injury of one *testicle*, which accident he concealed from delicacy. In the month of November following, he applied to me for medical assistance. He complained of severe pain in the back and lower part of his abdomen, which was attended with fever, chills, &c., and a difficulty of standing erect. The treatment was repeated venesection, blisters, and saline cathartics. He was convalescent in a few days, but said nothing of the injury till March, 1820, at which time the pain in his back and the other symptoms returned, though with less inflammatory appearances. Upon examination, one testicle was found to be very large, and in a scirrhous state. He complained of occasional pain from the testicle, up the spermatic cord, terminating in his back, of nausea and faintness, loss of appetite, &c. He underwent one moderate bleeding, blisters to the part, and the use of ointment of stramonium or mercury. Small doses of calomel were given internally, but without the desired effect. On the 1st of June, by the assistance of Dr. A. D. Spoor of Athens, I removed the scirrhous testicle. For three or four days after the operation, the inflammatory symptoms ran high, during which, at three bleedings, we took 28 ounces of blood, using laxatives and low diet, &c. On the 8th day, inflammatory symptoms had quite subsided, together with the pain in his back. The wound healed kindly.

On the 4th of September, 1820, he applied to me again, and complained of severe distress in his stomach, loss of appetite,

chills, and slight fever, with a quick pulse. I immediately took more blood, and repeated it; applied a blister to the region of the stomach; laxatives and low diet. By the 8th, I could distinctly feel an enlargement, which, in the course of a few days more, was perceptible to the sight of his attendants. By the 10th of October, his abdomen was very much distended and unequal, and the skin discoloured from over-distension. On the 13th, I discovered a fluctuation in a prominent point of the tumour, immediately above the left os ilium. An incision was made here, but nothing escaped, save a small quantity of thin aqueous fluid. Respiration at this time was very laborious, particularly while in a horizontal position. He took but very little nourishment, say not to exceed five or six spoonsful of soup, or a little wine and water, per day, which would usually be rejected in the course of fifteen or twenty minutes. Opiates were given every day, to procure ease and sleep. He died on the last of October, a mere skeleton.

Upon examination after death, we found the stomach of a very dark aspect, and incredibly large. Its internal coat was very thick; and between the coats a cavity existed, which contained a large quantity of thick matter: the stomach, stretching from the diaphragm, which was considerably pressed up, down to the pelvis: it also adhered to the diaphragm. We found the puncture that had been made in the operation above described, to have pierced the stomach three inches from the lower end. The spermatic cord was found in a sound state, and there was some pus about the left kidney, against which the stomach also pressed. The small intestines were thrown mostly down into the pelvis, and were empty, except here and there inflated.

Extract of a letter to one of the Editors, from Oliver B. Baldwin, *M. D., dated Newark, N. J. April 22d,* 1823.

Tetanus.—While practising medicine in Cincinnati, Ohio, in the summer of 1818, I was called upon to see Mrs. B., aged about 28. Ten days previous to my seeing her, as nearly as could be ascertained, while walking in the yard barefooted, she accidentally injured in a slight degree the great toe of one foot with a piece of bone, which was at the time of so trifling a nature as to give her no un-

easiness.* When I saw her, I found the lower-jaw so firmly fixed, that it was with the greatest difficulty I inserted the point of a small spoon. I immediately applied a large blister under the lower-jaw, extending from one ear to the other, and commenced with giving her a tea-spoonful of laudanum every two hours, and in the intermediate hour gave her strong brandy and water. I directed her bowels to be kept open by enemata. On the third day, hemorrhage from the uterus came on. I took some blood from the arm, ordered cold applications to the pubes, discontinued the use of the brandy, continued the use of the laudanum. On the second day after the hemorrhage, a fleshy substance, of an oval appearance, and about four ounces in weight, was discharged per vaginam, which, on cutting open, exhibited a fibrous appearance, not unlike the internal structure of the uterus. The hemorrhage gradually ceased; the spasm of the lower-jaw, in like manner, in a short time subsided, and the patient recovered.

Fourth Case of Osteo-Sarcoma, of the right side of the lower-jaw, of a few months' duration, in a man aged about 60.—The carotid artery of that side was tied with a single ligature, and the jaw-bone extirpated from the first bicuspis tooth, to above the angles. Both operations were performed at the same time. No unpleasant symptoms followed, and the patient recovered. It was performed on the 22 of May, by Professor Mott. The patient leaves town for the country in a few days.

Internal Use of Tincture of Cantharides.—This article of the materia medica, which has been more or less a popular remedy from the time of Hippocrates to the present day, is now administered advantageously to an extent which its earlier prescribers deemed inevitably fatal. In several recent cases in this city, it had been given internally to the amount of four, five, and six ounces of the tincture within the course of twenty-four hours, in certain affections of the genital system. In no instance have any of those untoward circumstances followed its use, which Orfila and almost every other writer have attributed to it.

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* The scratch or wound soon healed.

University of the State of New-York.—College of Physicians and Surgeons.

City of New-York, May 6, 1823.

THE College of Physicians and Surgeons will commence their course of Lectures, for the ensuing winter session, on the first Monday of November next, (the 3d,) at the College in Barclay-street.

Dr. HOSACK, *on the Theory and Practice of Physic, and Clinical Medicine.*

Dr. MACNEVEN, *on Chymistry.*

Dr. POST, *on Anatomy and Physiology.*

Dr. MITCHILL, *on Botany and Materia Medica.*

Dr. MOTT, *on Surgery.*

Dr. FRANCIS, *on Obstetrics, and the Diseases of Women and Children.*

The BOARD OF TRUSTEES deem it proper to make it known, that, in conformity with the ordinances of the Honourable the Regents of the University, every Student is required to attend two full courses of all the Lectures delivered in this College, before he can be admitted as a candidate for the Doctorate; unless said Student shall have previously attended Lectures in said College prior to the session of 1822–3, or shall have attended one entire course of Lectures delivered in some respectable Medical School or University. The Candidate must, also, have studied Medicine three years with some respectable practitioner, have arrived at the age of twenty-one years, and it will be expected that he produce written testimony to that effect.

The Matriculation Ticket is five dollars, the holder of which is entitled to the use of the College Library.

By order of the Board,

WRIGHT POST, M. D. *President.*

JOHN W. FRANCIS, M. D. *Registrar.*

Goitre in the Western part of the State of New-York.—In his observations on certain diseases, which more particularly prevail in the State of New-York, the late Rev. Dr. Dwight gives us the following interesting information on goitre:

"There is another disease, which is unquestionably owing to the nature of the country, and not merely to the recency of its

settlement. This is what is called in Switzerland the *goitres*, or the *hernia gutturis*. By the Hon. Uriah Tracy, late a Senator of the United States from Connecticut, I am informed, that this disease is found to some extent throughout a great part of the regions lying North of the Ohio, and West of the Alleghany mountains. Mr. Tracy was employed by the American government on a mission of importance, which required him to make a tour throughout a large extent of this country. Accordingly he passed through Pennsylvania by the way of Pittsburgh and Presque Isle; and thence crossing Lake Erie, proceeded to Detroit. From this place he went to Michilimackinac; and thence to Lake Superior. From Michilimackinac he returned to Buffaloe creek, and took the great Western road to Albany. In this excursion he found the goitres existing in the older settlements more, in the newer, less frequently, but actually existing at different distances throughout the whole region. Several other gentlemen have confirmed the account of Mr. Tracy. That the disease exists from Utica to Buffaloe, is, I think, certain; probably not in every township; but in such a manner, as to indicate that it is incidental to the country at large, and has a foundation in its nature and circumstances. When I was at Paris in the year 1799, there were in the parish of Clinton but two families affected with it. In these families, however, and most others, where it has been for a number of years, it seized on several of the members. At the north end of the bridge, which crosses the Mohawk from Utica, there was in the year 1799, a family within the township of Deerfield, consisting of ten or eleven persons, every one of whom, as I was informed, had the goitres.

"Persons afflicted with this disease, have, as is well known, swellings of the neck, rising indifferently in front, or at the sides; and, when they become large, extending throughout the anterior half. These swellings are of all sizes, from the slightest protuberance to that of a quart bowl; and are attended with stiffness of the neck, a slight degree of continual pain, and frequently a depression of spirits. The sufferings of the patient are increased by a cold, and by almost every other infirmity. Women are more frequently, and more severely, afflicted with this disease than men; feeble, than vigorous persons; and children, than adults. In the higher degrees it becomes a painful deformity; not only as

an unnatural protuberance, but by imparting a disagreeable cast to the features, particularly to the eyes. When the patient continues in the same place, and in the same habits of living, by which it was produced, it generally increases; but if he removes to a part of the country, where it is unknown, it not uncommonly decreases, and sometimes disappears.

The cause of this disease is by Mr. Coxe* supposed to be the calcareous matter, which in Switzerland is called *Tuff*, and which he concludes is so completely dissolved as not to affect the transparency of the water. In this state of minuteness, he supposes that it may be introduced, by the circulation of the blood, or otherwise, into the glands of the throat: where, by accumulation and concretion, particularly in the thyroid gland, in its structure favourable to the deposition and detention, of such particles; they produce an irritation, by means of which a viscid fluid, naturally contained in the cells of this gland, is secreted in unnatural quantities, and the gland itself unnaturally enlarged by the distention of these cells.

"In support of this opinion, Mr. Coxe alleges the following proofs:

"1. He observes, that during his travels through Europe he always found that tuff abounded wherever goitres were common. The places, which he specifies, are the Vallais, the Valteline, Lucerne, Friburgh, Berne, the region near Aigle and Bex, several places of the Pays de Vaud, the region near Dresden, the valleys of Savoy and Piedmont, and tracts near Turin and Milan.

"2dly. One of the principal springs, which supplies the Friburgh with water, has deposited large quantities of tuff on the rock, from which it issues.

"3dly. A gentleman of veracity informed Mr. Coxe, that he had a small swelling on his throat, which usually increased in the winter when he chiefly resided at Berne, and diminished in summer when he removed to other places.

"4thly. The waters at Lucerne, except one spring, are all impregnated with tuff; and the natives, who live near that spring, are less subjected to goitres than the other inhabitants; and mem-

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* See Coxe's Travels in Switzerland, Letter 35.

bers of the same family, who drank only from that spring, were less subject to the goitres than others, who were not thus exact.

" 5thly. Places contiguous to those, in which goitres and tuff were frequent, and having precisely the same situation and climate, but destitute of tuff, were observed by Mr. Coxe to be free from goitres.

" 6thly. A surgeon, whom he met at the baths of Leuk, informed Mr. Coxe that he had repeatedly extracted concretions of tuff from goitres; particularly from one which suppurated, he took several flat pieces, each about half an inch long. The same substance he declared had been found in the stomachs of cows, and in the goitrous tumours, to which the dogs of that country were subject. The same gentleman assured Mr. Coxe, that he had diminished, and cured, the goitres of many young persons, particularly one of his own children, who was born with a goitre as large as an egg, by emollient liquors and external applications. The principal method adopted by this gentleman to prevent them in future, was to remove his patients from the places where the springs were impregnated with tuff; and, if that could not be contrived, to forbid them the use of water altogether. His own family he prohibited from tasting the spring waters in his neighbourhood, unless they were distilled, or mixed with wine, or vinegar; and this preserved them from goitres, which were extremely common in the town where he lived.

" This account of Mr. Coxe appears to me satisfactory. The whole country, where this disease prevails in the American States, is calcareous. The goitres, found here, exist in spots, and particular families. It is incredible, that they should be derived from *the mode of living;* because they are found among those who live in every mode between luxury and beggary. It is incredible, that they should be derived from *climate;* because there are no such differences of climate in the tracts where they abound, and where they are unknown, as to furnish any explanation of the subject; and because a great multitude of families have them not, who are interspersed among those who have them. They cannot be derived from *lime-stone in its common form*, or *the carbonate of lime;* because this mineral abounds throughout most of New-England, West of the Green Mountains, as well as in the eastern parts of the State of New-York; and yet in both these

regions goitres are unknown. It is unnecessary to observe, that they cannot be derived from snow-water.

" The remark of M. de Saussure, that foreigners established in Switzerland, are never affected with these tumours, is inapplicable to this region. The inhabitants here, are universally foreigners; and almost all of them came from New-England, or other countries, where this disease is absolutely unknown. Yet many of the original settlers, as well as their children, are afflicted with this evil.

From the account of Mr. Coxe, if there be no error in it, we are furnished with one very important truth, relative to this subject. It is this: that the surgeon, mentioned above, preserved his own family by invariably prohibiting them from drinking the spring waters, unless when they had been distilled, or mixed with wine or vinegar. To distil water for the drink of the inhabitants of a town, or village, must certainly be an expensive and tedious process. Still it will be less tedious than a general diffusion of goitres. By many families it might be done for their own use, without any considerable difficulty. All families cannot afford to mix their water with wine; but most might procure vinegar, sufficient for this purpose; and habit would easily reconcile them to the use of this liquid. Among many nations it has been a favourite beverage. Possibly the tuff may be precipitated by means hitherto undiscovered, and yet safe and pleasant. That tuff exists in this country is not known, probably because it has never been examined.

" The existence of this disease throughout so great an extent of country, is, I believe, unexampled in the world. Should it spread very generally among the inhabitants of this region, it must hereafter affect many millions of the human race. When we consider the magnitude of this fact, and remember that the disease in its higher stages, is hitherto incurable, it becomes a very serious evil. It is to be hoped, that the same good Providence, which has so lately, and so wonderfully dissipated the terrors of the smallpox, by the discovery of the vaccine inoculation, will also disclose a remedy for the melancholy disease under consideration.

" Distressing, however, as this disorder seems to a stranger, the inhabitants appear already to regard it with abated apprehensions, and to be approximating in their views of it towards indifference.

An intelligent and respectable lady in Pittsburgh, was asked by Mr. Tracy whether it existed in her family; she said, she presumed it did not. The children were then called up and examined, and five of them were found to be affected with it."--*Travels*, vol. iv.

American Locality of Cerium.—A mineral, brought by Dr. Langstaff, from New-Andover, in Sussex county, N. J., on examination in the Laboratory of Columbia College, appears to contain cerium. We are promised by Professor Renwick a detailed account of his analysis, which shall appear in a subsequent number.

Results of Meteorological Observations for 1820, 1821, *and* 1822, *at Albany.* By T. Romeyn Beck, M. D.

The observations were made at 7 A. M., 2 P. M., and 9 M. P. of each day. The wind was noticed twice a day, and as a general rule, the direction in the morning is taken for the whole day.

	1820.	1821.	1822.
Mean temperature at 7 A. M.	43.24	42.63	43.85
Mean temperature at 2 P. M.	56.31	54.52	46.00
Mean temperature at 9 P. M.	47.40	46.81	47.69
Mean of all the Observations,	48.98	47.99	49.18
Mean of the Observations for 1820, 21, & 22,		48.71	
Greatest height of the thermometer,	100	93	90
Lowest do. do.	5	14	14
Greatest Annual Range	105	107	104
Greatest Monthly Range	64	58	52
Greatest Daily Range	36	28	30
WEATHER.			
Clear days No.	122	162	154
Cloudy days No.	168	160	135
Variable days No.	76	43	76
Snow, number of days on which it fell,	30	40	22
Rain, do. do.	87	86	91
WINDS.			
North No. of days	41	35	47
Northwest do.	63	67	55
West do.	81	90	70
South do.	89	83	109
Southwest do.	14	19	4
Southeast do.	63	59	63
East do.	9	7	2
Northeast do.	6	5	15
Prevailing winds	South	West	South.

Annual Report of Deaths in the City and County of New-York, for the Years 1821 and 1822.

Names of Diseases.	1821	1822
AGES.		
OF WHOM WERE OF		
the age of 1 year and under	825	793
between 1 and 2	369	264
2 5	261	219
5 10	122	101
10 20	158	150
20 30	445	427
30 40	446	421
40 50	346	333
50 60	243	203
60 70	175	156
70 80	79	98
80 90	57	54
90 100	15	10
100 and upwards,	1	2
DISEASES AND CASUALTIES.		
Abscess	10	12
Aneurism	1	2
Apoplexy	45	60
Asphyxia	1	6
Asthma	12	4
Burned or Scalded	17	21
Carbuncle	1	
Cancer	14	11
Casualty	38	38
Catarrh	2	1
Chicken Pox	2	
Childbed	19	19
Cholera Morbus	14	21
Colic	12	6
Compression of the Brain	3	2
Consumption	715	624
Convulsions	160	168
Contusion	6	5
Cramp in the Stomach	3	5
Diabetes	2	
Diarrhœa	49	56
Drinking Cold Water	2	4
Dropsy	108	74
Dropsy in the Chest	27	30
Dropsy in the Head	152	141
Drowned	36	56
Dysentery	142	109
Dyspepsia	5	4
Epilepsy	10	6
Erysipelas	2	6
Fever	121	50
Fever, Bilious	21	18
Fever, Bilious Remittent	16	17
Fever, Inflammatory	3	2
Fever, Intermittent	7	8
Fever, Malignant	3	1
Fever, Puerperal	4	5
Fever, Putrid	1	2
Fever, Remittent	35	27
Fever, Scarlet	3	1
Fever, Typhus	127	95
Fever, Yellow		165
Flux, Infantile	114	115
Fracture	4	5
Frozen		1
Gout	2	2
Gravel		2
Hemorhage	14	7
Hemoptysis	4	8
Herpes	1	2
Hives	125	109
Jaundice	16	10
Infanticide	5	1
Inflammation of the Bladder	2	
Inflammation of the Bowels	49	64
Inflammation of the Brain	28	22
Inflammation of the Chest	115	119
Inflammation of the Liver	27	29
Inflammation of the Stomach	11	9
Insanity	6	6
Intemperance	64	44
Locked Jaw	7	5
Lumbar Abscess	3	3
Manslaughter	1	
Marasmus	49	31
Measles	109	1
Menorrhagia	1	1
Mortification	16	9
Nervous Disease	4	4
Old Age	122	115
Palsy	37	36
Peripneumony	20	23
Pleurisy	15	18
Pneumonia Typhodes	5	5
Quinsy	15	16
Rheumatism	7	1
Rickets	2	
Rupture	5	7
St. Anthony's Fire	1	2
Schirrus of the Liver	2	1
Scrofula, or King's Evil	12	12
Sore Throat	10	17
Spasms	4	4
Spina Bifida	2	3
Sprue	25	14
Still Born	174	205
Stone Strangury		2
Sudden Death	18	11
Suicide	16	13
Syphilis	9	5
Tabes Mesenterica	96	84
Teething	30	37
Tumour	1	1
Vomiting Blood	1	
Ulcer	13	9
Unknown	62	46
Whooping Cough	92	35
Worms	18	17
Total	3542	3231

List of Deaths of the several Sexes, and the number that occurred in each Month.

	1821.	1822.
Men.....	974	997
Women ...	835	695
Boys.....	892	836
Girls	841	703
January ...	287	278
February..	249	229
March	304	251
April	271	212
May.....	257	237
June.....	223	235
July.....	331	318
August....	456	370
September.	360	328
October...	323	306
November.	222	236
December.	259	231

FOREIGN.

On Poisoning by Oxalic Acid.—In an elaborate paper on this subject, the joint production of Dr. Christison of Edinburgh and Dr. Coindet of Geneva, the following chemical tests for this poison are given.

The following process is to be observed for analyzing the suspected matters.

The stomach is to be washed with pure water, and if disorganized, preserved for analysis. The washings, the contents of the stomach, the vomited matter, and the disorganized tissues and suspected articles of food, are to be boiled separately, a little pure water being added if necessary. If chalk or magnesia has been used as an antidote, what remains on the filter (except that from the tissues) is to be preserved for analysis. The filtered fluid is to be tried first with litmus paper, and then by the three following tests—the hydrochlorate of lime, the sulphate of copper, and the nitrate of silver.

1. Decolorize the fluid, if necessary, with chlorine. The hydrochlorate of lime, dropped into a solution containing oxalic acid,

or an oxalate, especially the latter, throws down an insoluble oxalate of lime. But it also precipitates with the carbonates, sulphates, phosphates, tartrates, citrates, and with all their acids but the carbonic. The following mode of procedure will serve to distinguish it from these substances. The nitric acid will not take up the sulphate of lime, but a few drops of it dissolve the oxalate. The hydrochloric acid will not dissolve the oxalate, unless added in very large quantity, while two or three drops will take up the carbonate, phosphate, tartrate, or citrate.

2. Decolorize a second portion of the fluid with chlorine. The sulphate of copper precipitates oxalic acid bluish-white, and the oxalates pale blue. This is a test sufficiently delicate, especially if any free oxalic acid is previously neutralized with potass; and it is also a very useful one, since the sulphate of copper does not affect fluids that contain sulphuric, hydrochloric, nitric, tartaric, citric acids, or their ordinary salts. But it precipitates the carbonates, and throws down phosphoric acid, whether free or combined. The oxalate, however, is easily distinguished; for it is insoluble in hydrochloric acid, while a few drops of that acid at once take up the phosphate or carbonate.

3. The nitrate of silver produces a heavy white precipitate with oxalic acid, and still better with the oxalates; and this precipitate, when dried and heated over a candle, becomes brown on the edge, then of a sudden fulminates faintly, and is all dispersed in white fumes. When impure, it deflagrates like gunpowder, and when in too small quantity to be collected, the filtering paper burns as if steeped in nitrate of potash. This is a very characteristic and delicate test. From a quarter of a grain of oxalic acid dissolved in 4000 parts of water, we have procured enough of the powder to show its fulmination twice. The precipitation alone cannot be trusted to; for it may equally take place with hydrochloric, phosphoric, citric, or tartaric acid, and likewise with the alkalis. But when the test of fulmination is tried, there is no chance of its being confounded with any of these, except perhaps with the tartaric and citric acid. The compounds of these acids with silver, we find, possess properties that will render the nitrate of silver one of the simplest and most correct tests for distinguishing them from each other, and from oxalic acid. The nitrate of silver becomes brown under exposure to heat, froths up, than de-

flagrates slightly, with the discharge of white fumes, and a large quantity of dull, ash-gray, crumbling matter remains, of a very peculiar fibrous structure. The tartrate of silver becomes brown, and froths up like the citrate, white fumes are discharged without even deflagration, and there is left an ash-coloured botryoidal mass, encrusted outwardly with silver.

If magnesia or chalk has been given as an antidote during the patient's life, the oxalate of magnesia or lime may be mingled, in the form of powder, with the contents of the stomach, or with the vomited matter. The powdery matter is then to be separated by elutriation from what remains upon the filter during the previous process. If magnesia has been the antidote employed, it is only requisite to boil the powder in pure water for a few minutes, and then subject the filtered fluid to the three tests described above. For the oxalate of that earth is sufficiently soluble to furnish, even with a single ounce of water, a solution in which all the foregoiug characters may be observed. If the antidote employed has been chalk, then the powder is to be boiled for 15 minutes with half its weight of pure subcarbonate of potass dissolved in 20 or 30 parts of water. A mutual interchange then takes place, and the solution contains oxalate and carbonate of potass. In applying the tests to this solution, the free alkali is to be previously neutralized with hydrochloric acid, when hydrochlorate of lime or sulphate of copper is to be used, and with nitric acid, before using the nitrate of silver. In the last case, there ought to be as little excess of acid as possible, because the oxalate of silver is soluble in nitric acid.

These tests of oxalic acid are very little influenced by the presence of such animal matter as may exist in the suspected fluid after boiling and filtration. The chief animal principle then present is gelatin. Gelatin alone is not precipitated by hydrochlorate of lime, sulphate of copper, or nitrate of silver; neither does it affect the delicacy of the two first as tests of oxalic acid, but when, in very large proportion, it suspends the action of nitrate of silver. Whenever this obstacle is encountered, or if, from any other cause we have left unexamined, this the most decisive of the tests does not give satisfactory results, the oxalic acid may be thrown down with the hydrochlorate of lime, and the insoluble oxalate boiled with carbonate of potass, as just described. This process will

probably be always proper when the suspected fluid is deeply coloured; for we cannot decolorize it with chlorine before using the nitrate of silver, since chlorine precipitates abundantly with that salt.

To conclude: though the description of the tests just given may appear complicated, the application of them in practised hands is sufficiently simple; and the evidence they furnish, though drawn solely from the properties of minute precipitates, is as conclusive as if the acid were presented in its concrete state; since the best mode, perhaps, of recognising it in that state would be to subject it to the experiments we have detailed.—*Edin. Med. and Surg. Journ. April*, 1823.

Extract of a Letter from Thomas Stewart Traill, M. D. Liverpool, to Dr. Duncan, Junior.

On the presence of Oil in Human Blood.—A patient of my friend Dr. M'Cartney has afforded me another opportunity of detecting oil in the serum of human blood. The patient is a stout young man, who was labouring under acute hepatitis. The blood separated spontaneously; but the white colour of the serum induced Dr. M'Cartney to send the fluid to me for examination. Its colour and consistence strikingly resemble that described in your XVIIth Volume. Its sp. gr. = 1.0187, which nearly agrees with that of the second instance, and is somewhat less than in the first.

100 grains of this serum evaporated slowly to dryness, afforded 21.1 gr. of residue. Of this, 4.5 gr. consisted of oil, exactly resembling that obtained in my previous experiments. The albumen, after being well soaked in distilled water, and repeatedly washed and dried = 15.7 grs. The evaporation of the washings afforded 0.9 gr. of saline matter, of which 0.7 were muriates, and 0.2 probably lactates. Hence we may state the contents of this remarkable serum to be—

Water - - -	= 78.9
Albumen - - -	= 15.7
Oil - - - -	= 4.5
Salts - - -	= 0.9
	100.0

The peculiarities of this serum consist in its containing oil, which exists in the form of an emulsion, and in the large proportion of 4½ per cent.; in its having about double the quantity of albumen that is assigned, by the best chemists, to the serum of blood; and in its diminished proportion of saline ingredients.

It is worthy of remark, that these peculiarities appear to be connected with inflammatory disease; and, in two of the cases, were decidedly accompanied by acute hepatitis. Since my last letter to you, I have had an opportunity of examining the serum of the blood of one of the individuals above alluded to, when he was in health; but it presented nothing peculiar.

I may also add, that the serum, resembling *thin water-gruel* in colour and consistence, (which, if I recollect aright, was first described to me by you) has fallen under my observation. I was unable to detect any oil in it: and its peculiarities seemed to be owing to an excess of albumen.

Whether these facts will assist in throwing light on the functions of the liver, it may be premature to determine.—*ibid.*

Cases of Inverted Uterus successfully treated by Ligature. By Charles Johnson, M. D.

Mrs. M. æt. 50, in July, 1820, came to the vicinity of Dublin, for the benefit of sea-bathing. From the birth of her first child, fourteen months before, she had been subject to constant mucous discharge from the vagina tinged with blood, and to profuse and frequent recurrence of the catamenia, often, especially after exertion, amounting to uterine hemorrhage. In consequence of these discharges she was reduced to a state of great debility, which was farther increased by night sweats and diarrhœa: her lips and cheeks were perfectly pale, and she was emaciated in the last degree. There had been considerable difficulty in bringing away the placenta. On examination per vaginam, a tumour was found in the vagina of the size and shape of a pear. Dr. Clarke was called in consultation, and it was agreed that this tumour was polypus uteri, and that the ligature ought to be applied. The ligature when applied produced so much pain that a second examination was made, when it was ascertained that the tumour was the uterus partially inverted. For the patient's safety it was indispensable to do some-

thing to check the discharge ; the ligature was continued and cautiously tightened, so that at the end of three weeks the tumour came away, and was found to consist of the fundus uteri and fallopian tubes. The patient's health now amended rapidly, and at the end of a year natural menstruation was established.

The other case, that of Mrs. B. æt. 27, was every way similar ; great debility and œdema of the lower extremities had taken place. There was also in this case enlargement of the left ovarium. The ligature was applied on the 19th of November, 1816, and on tightening it on the 20th, retention of urine, and considerable uneasiness were the consequence. Feverishness supervening, the ligature was obliged to be removed entirely for a time, but it was hoped, as the discharge had become putrid, that the vessels had undergone sufficient pressure to prevent the recurrence of hemorrhage. This hope proved fallacious. In three weeks the hemorrhage returned, and the ligature was again applied. Jan. 2.—Considerable fever, headache and restlessness, but no pain or tenderness in the belly. She had purgative medicines, and an anodyne at bed-time, and on the 3d she was free from the feverishness. On the 12th, the canula came away, and the tumour, which proved to be the fundus uteri, and fallopian tubes, was found lying in the vagina. In a month she could walk abroad, the discharge had entirely ceased, and she was regaining strength rapidly. The portion of the uterus which was removed in the first case, is preserved in the museum of the College of Surgeons.

It was long thought, that this was a complaint which could admit of palliation only. Dr. Denman says, " All that art can do is to alleviate their sufferings, to moderate symptoms, and sometimes to support the perpending uterus, by means of a flat pessory." M. A. Petit, of the Hotel-Dieu, Lyons, mentions a case where an eminent surgeon passed a ligature round an inverted uterus of three years duration, thinking it was a polypus, and by that means rescued the woman from the lingering death which threatened her. In all cases in which this treatment has been since adopted, it has proved successful. It is even of consequence to know that the hemorrhage from inverted uterus may be restrained by means of the ligature, a fact ascertained by Dr. Clarke, of Dublin, as early as 1803.—*Dublin Hospital Reports, vol. III.*

*Case of Cæsarean Operation, in which the Mother and twin Infants were saved. By MM. Horn, Father and Son.**

On the 27th of January, 1821, the Messrs. Horn performed the Cæsarean operation on the wife of one Amos, of Fischelbach, and had the satisfaction to save both the mother and twin infants. In consequence of the violent inflammation of the genital organs supervening after a laborious parturition thirteen years before, the superior part of the vagina was found adhering to the os uteri, and firmly cicatrized. Between the labia majora, there was an aperture of not more than an inch in extent, and which, with great difficulty, could allow of the immisio penis. This aperture contracted into a narrow tortuous canal, the dimensions of which could not so easily be taken. Through this, the menstrual discharge came away. After recovering from the operation, the woman lived in her usual state of health for nine months after, and also the twin infants, who had been recommended to a good nurse. The Messrs. Horn attest the narrowness of the vagina, and the perfect adherence of its superior portion to the os uteri. Taking these circumstances into consideration, M. Hufeland is inclined to think that the case furnishes an argument in favour of the theory, which supposes conception to be affected by the aura seminale.—*Quarterly Journal of Foreign Medicine and Surgery.*

Communication between the stomach and bladder.—The experiments made in England by Darwin, and more recently by Wollaston, Brande, and Marcet, tended to prove that different substances introduced into the stomach were found in the urine, without having passed by the medium of the lymphatics or blood-vessels. M. Fodéra has resumed these experiments ; and he has given to them an ingenious modification, which enabled him to discover some phenomena which had escaped the English physiologists. He introduced into the bladder a catheter, with a cork, having tied the penis that the urine might not flow by the sides of the instrument. He laid bare the œsophagus at the anterior part of the neck, and injected into the stomach a solution containing some grains of the hydrocyanate of potass, with iron. This being done, he frequent-

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* Hufeland's Journal.

ly uncorked the sound, and received the urine which flowed from it on paper. He placed a drop of solution of sulphate of iron on the paper, and added to it another of hydrochloric acid, to make the colour disappear. In one experiment, the prussiate was detected in the urine ten minutes after its injection into the stomach; and, in another, five minutes thereafter. The animals were instantly opened. The salt was found in the serum of the blood drawn from the thoracic portion of the inferior vena cava; in the right and left cavities of the heart, in the aorta, the thoracic duct, the mesenteric ganglions, the kidneys, the joints, and the mucous membrane of the bronchiæ.—(*Journal de Physiologie*, Janvier, 1823.)

Transudation.—The following experiments prove that, in the dead body at least, transudation of fluids may take place at the same time from within outwards, and from without inwards, through the parietes of the intestines and of blood-vessels. M. Fodera filled a portion of the intestine of a rabbit with a solution of prussiate of potass, and plunged it into a solution of the hydrochloric of lime: he introduced into it another portion of hydrochloric acid, and surrounded it with sulphuric acid; finally, he placed a bladder filled with fluid, coloured with turnsol, in a solution of galls. Some time after he found in the interior of these, respectively, hydrochlorate of lime, sulphuric acid, and gallic acid, recognised by the nitrate of silver, hydrochlorate of barytes, and sulphate of iron; and, in the liquids in which he had immersed them, prussiate of potass, hydrochloric acid, and turnsol, recognised by the sulphate of copper, nitrate of silver, and by the colour of the infusion of galls being rendered bluish by the potass.

Similar phenomena were witnessed on the living body; and the rapidity of the transudation was found to be much increased by the application of galvanism. For this purpose, the ingenious experimentalist injected into the bladder, or into a portion of intestine, in a living rabbit, a solution of the prussiate of potass, which was made to communicate with a copper wire: he placed on the exterior surface a piece of linen, moistened with a solution of the sulphate of iron, which communicated with an iron wire: these wires were brought into contact with those of the battery. If the galvanic current be directed from without inwards, by making the

iron wire communicate with the positive pole, and the copper with the negative, the tissues of the organs become imbibed with Prussian blue ; but, if the current be changed, the current is manifested on the linen.—(*Journal de Physiologie*, Janvier, 1823.)

Chronic Ulcers.— La Charite, the principal hospital at Berlin, has long been celebrated for the cure of chronic ulcers of the legs, and the method adopted seems chiefly to consist in restricted diet. The plan is as follows : on admission into the hospital, the patient is purged, and put into a bath ; he is then placed in a ward assigned for such cases, and confined to very spare diet, while cold applications are made use of to the sore. The bath, and a purgative of calomel and jalap, are repeated twice a-week. By this treatment the ulcers soon acquire a better appearance, and, even if very foul and extensive, they generally heat in a month or six weeks. Great attention is paid to the state of the pulse, which is examined every day, because it affords an indication by which to judge whether the treatment is to be carried on or not: if it be reduced to thirty-five or forty, the starving system is discontinued, and somewhat better diet allowed, until the pulse becomes natural again ; as, otherwise, blindness, ringing of the ears, giddiness, fainting, &c. are liable to be produced. If attention is paid to this, no other danger is to be apprehended in the progress of the cure. Another advantage of this plan is, that it is exceedingly cheap.—*Rust's Mag. der. Heilkunde*, 9 b.

Hydriodate of Potass.—The importance of preparing the various salts of iodine used in medicine with accuracy, is too obvious to require comment ; we therefore regard the following directions respecting the hydriodate of potass as meriting attention :

One part of iodine, and three or four parts of water, are to be introduced into a phial or mattress ; by degrees, and at intervals, an excess (one-half part, for example,) of pure filings of iron is to be added. The combination immediately takes place ; much heat is disengaged ; the iodine disappears, and the liquid becomes of a deep red colour. During this violent re-action, a hydriodate, with excess of iodine, is formed, which has only to be heated, and constantly and slightly agitated, to be converted into a simple hydriodate of iron. The action is shown to be terminated by the almost complete absence of colour in the liquid, but still more

certainly by white paper being no longer stained red by it. The liquid is to be filtered, and to be augmented by some parts of water; it is to be placed in a sand-bath, in a retort or mattress, and nearly at the boiling point; then the iron is precipitated by means of pure carbonate or subcarbonate of potass. This part of the process requires some attention, lest an excess of potass be added; which, however, may be separated by repeated crystallizations, or saturated with hydriodic acid. After having filtered, in order to separate the ferruginous precipitate, and having washed it well, it is to be evaporated. The salt may be made to crystallize by cooling or by evaporation: in this latter case, the concentrated solution of the hydriodate of potass is to be placed, not upon a stove, because the salt would form along the sides of the vessel, and the liquid in the end be entirely remixed,—but on a very gentle fire, where the edges of the vessel, being less heated than the bottom, may condense a little of the vapour which rises, and thus prevent the ascension of the salt. By degrees, crystals are deposited; when they fill almost all the space occupied by the liquid, it must be allowed to cool; then the mother water is to be poured off, and again evaporated to obtain more of the salt; finally the crystals are to be entirely dried at a stove or fire, where they undergo a slight decrepitation.—*Journal de Pharmacie, Janvier*, 1823.

Castor Oil.—The processes generally employed for the extraction of the oil from the seeds of the ricinus, are by boiling in water and by expression. The former is expensive, from the quantity of fuel it requires, and affords but a small proportion of oil, which becomes in some degree empyreumatic, from the heat necessary to separate the mucilage. By the second, a milder oil is obtained, it is true, but it is extracted with difficulty, from its viscidity and the great quantity of mucilage which accompanies it. These difficulties are overcome by the following process, founded on the property possessed by alcohol of dissolving the oil, and separating the mucilage. It consists in mixing the seeds, deprived of their rind, and beat into a paste with a certain quantity of alcohol, (four ounces to the pound,) at 36° (of the centigrade thermometer;) this mixture is subjected to the press; the liquid flows with great facility, and is afterwards distilled; the residue of

the distillation washed with many waters. The oil separated by the water is placed upon a gentle fire, to evaporate all the moisture; it is then taken from the fire, and thrown upon filters placed upon a stove heated to 30°; it filters freely, and the oil obtained is very clear and very mild. The products constantly obtained in this way, by M. Faguor, are ten ounces of oil from each pound of the peeled seeds, and only seven ounces with the rinds on. These products greatly exceed the quantity obtained by the old methods. M. Henry obtained a still larger proportion of oil, the difference probably depending on the superior force of his press. Half the quantity of alcohol employed may be recovered by the distillation.—*Journal de Pharmacie, October*, 1822.

New Faculty of Medicine of Paris.—The King of France, by an ordonnance just published, has re-organized the Faculty of Medicine of the Academy of Paris. This official document is of great length; but we have extracted the principal facts contained in it, which may be interesting and useful to our readers to be acquainted with. The Faculty of Medicine is to be composed of twenty-three professors; thirty-six associates (*agregés*) are attached to these, two-thirds of whom are in exercise; and there is also an indeterminate number of free associates. The rank of associate can only be conferred on doctors in medicine or surgery who have reached the age of twenty-five. The professors on this occasion are appointed by the king, and the two-thirds of the associates by the grand master of the university. In future, when there is a vacancy for the place of professor, three candidates are to be presented by the assembly of the Faculty, three by the Academic Council, (both taken from among the associates,) and the nomination shall take place from among these by the grand master, according to the regulations of the university. The professors and associates of the other Faculties of Medicine in the kingdom may also be named as candidates.

The chairs in the Faculty of Medicine are the following:—1, Anatomy; 2, Physiology; 3, Medical Chemistry; 4, Medicine; 5, Natural History (medical;) 6, Pharmacology; 7, Hygiene; 8, Surgical Pathology; 9, Medical Pathology; 10, Operations and Dressings; 11, Therapeutics and Materia Medica; 12, Legal Medicine; 13, Midwifery and Diseases of Women and Children.

Two professors are attached to the chair of surgical pathology, two to that of medical pathology, and one to each of the others.

Relative to the admission of pupils, the following regulations are to be observed :—No ticket will be granted unless, 1st, the register of birth is produced; 2d, a certificate of good conduct and morals from the mayor of the commune, and confirmed by the prefect; 3d, the diploma of bachelor in letters and sciences; and, 4thly, if a minor, the consent of his parents and guardians.

The second ordonnance gives the names of the professors, attached to the different chairs of the Faculty, as follows ;—Messrs. Beclard, anatomy; Dumeril, physiology; Orfila, medical chemistry; Peletan, jun. medicine; Clairon, medical natural history; Guilbert, pharmacology; Bertin, hygiene; Marjolin and Roux, surgical pathology; Fizeau, medical pathology; Richerand, operations, &c.; Alibert, therapeutics and materia medica; Royer Collard, legal medicine; Desormeaux, midwifery and diseases of women and children; Recamier, Laennec, Landré, Beauvais, and Cayol, medical clinics; Boyer, Dupuytren, and Bonjou, surgical clinics; Deneux, midwifery clinics.

Messrs. De Jussieu, Vauquelin, Dubois, Pelletan, sen. Deyeux, Pinel, Desgenettes, Chaussier, Lallemand, Le Roux, and Moreau, are named honorary professors. The associates (on exercise) appointed by the grand master of the university of Paris, in conformity with the above degree, are Messrs. Adelon, Alard, Arvers, Breschet, Capuron, Chomel, Cloquet (Hyppolite,) Coutanceau, De Lens, Gaultier de Claubry (Emmanuel,) Guersent, Jadioux, Kergaradec, Maisonabe, Moreau (F. Joseph,) Murat, Parent du Chatelet, Pavet du Courteille, Rateau, Richard (Achille,) Rullier, Segalas, Serres, Thevenot du Saint Blaise. By another arrêt of the grand master, M. Landré Beauvais is named dean of the Faculty.—*London Med. and Phy. Journal.*

Remarks on Poisons.—Fodere, in the fourth volume of his Medecine Legale, arranges poisons according to their action on the living system, and which, with a slight alteration in the order of the classes, has been adopted by Orfila, and most other writers on Toxicology. Poisons are thus reduced into six classes: viz.—1. *Corrosive* or *Escharotic*, as the preparations of Mercury, Arsenic, Antimony, Copper, Tin, Zinc, Silver, Gold, and Bismuth; the

concentrated Acids, and caustic Alkalies and Earths; Cantharides; Glass and Enamel Powder. 2. *Astringent Poisons*, of which the preparations of Lead constitutes the only species. 3. *Acrid or Rubefacient Poisons*, which, with a few exceptions, are furnished by the vegetable kingdom, as certain drastic Purgatives, Hellebore, Euphorbium, &c. 4. *Narcotic-Poisons*,—Opium, Henbane, the Cherrylaurel, Stramonium, &c. 5. *Narcotico-Acrid*, embracing such articles as produce the united effects of the two former, and which constitute some of the most deadly poisons, as the Ticunas, Nux-vomica, Belladonna, Tobacco, Hemlock, Digitalis, &c. 6. *Septic Poisons*,—Contagious Miasmata, Putrid Exhalations from Animal Matter, Sulphuretted Hydrogen, the Venom of the Viper, &c. If we are to found our classification upon views strictly pathological, the above arrangement is perhaps as eligible as any that could be proposed, and it has certainly the obvious advantage of bringing together those individual substances which occasion effects somewhat analogous upon the living system; and yet such a plan will not enlighten our therapeutical doctrines. Arsenic and corrosive sublimate are, for instance, both corrosive poisons, but they differ from each other materially in their physiological action; and, when swallowed, require, for the preservation of the individual, a very different system of treatment. It is from the views of their physiological and chemical action that our curative indications are to be chiefly derived; and the able and interesting researches of Mr. Brodie enable us, in a very satisfactory manner, to construct an arrangement by which the treatment of poisons may be at once rendered more efficacious and simple: thus poisons may be said to act—

I. Through the medium of the Nerves, without being absorbed.

a. By destroying the functions of the brain.—Alcohol. Essential Oil of Almonds. Juice of Aconite. Oil of Tobacco. Opium.

b. By rendering the heart insensible to the stimulus of its blood.—Infusion of Tobacco.

II. By entering the Circulation, and acting through that medium, with different degrees of force, on the Heart, Brain, and Alimentary Canal.

Arsenic. Emetic Tartar. Muriate of Baryta. The Woorara, and all poisons which act by external application, as the venom of the viper, &c.

III. By a local action on the Mucous Membrane of the Stomach.

Corrosive Sublimate of Mercury. Acids and Alkalies. Mechanical Irritants, as diamond dust? powdered glass?

It had been long admitted that a poison may produce death by acting on the extremities of the nerves of the stomach and intestines, without being absorbed; but to the experimental labours of Mr. Brodie we are indebted for our present correct views upon the subject. It was observed by Bichat, (and the observation has been confirmed by Brodie,) that the influence of the brain is not directly necessary to the action of the heart; for that, when the functions of the brain are destroyed,—even when the head is removed,—the heart continues to contract for some time afterwards, and then ceases only in consequence of the suspension of repiration, which is under the direct influence of the brain. Assuming this as a principle, it will easily appear that certain poisons may, by affecting the brain, paralyze the muscles of respiration, and occasion death by suffocation. Mr. Brodie accordingly found that, by the administration of a large dose of alcohol to a rabbit, the pupil of its eyes became dilated, the extremities convulsed, and the respiration laborious; and that this latter function was gradually performed at longer and longer intervals, and that it at length entirely ceased. Two minutes after the apparent death of the animal, he opened the thorax, and found the heart acting with moderate force and frequency, *circulating dark-coloured blood.* He then introduced a tube into the trachea, and produced artificial respiration by inflating the lungs: and found that, by these means, the action of the heart might be kept up to the natural standard, as in an animal from whom the head is removed. The same phenomena resulted from the injection of two drops of the essential oil of bitter almonds, diffused in half an ounce of water, into the rectum of a cat; and from the application of the empyreumatic oil of tobacco to the tongue and rectum of cats and dogs.

Now it is obvious that the functions of the brain are immediately disordered by the influence of these poisons on the tongue, stomach, and lower bowels of animals, so instantaneously, that it is impossible that absorption should have already taken place. The poisons above enumerated appear to affect the brain only, and

through it the organs of respiration, leaving the powers of the circulation unimpaired: there are, on the contrary, certain substances which act on the heart at once; such is the infusion of tobacco, which suspends its action even before the animal ceases to respire, and kills by producing syncope. The same effects are occasioned by the two species of upas from Java, called *upas antiar* and *upas tieute*. In these cases, it is probable that the spinal marrow is primarily affected, which recent experiments have shown to have an intimate relation with the action of the heart. We next come to speak of the poisons which enter the circulation, and act through that medium on the heart, brain, and alimentary canal. These organs, however, are affected in very different degrees by different poisons. Mr. Brodie has shown that vegetable poisons, although when introduced into the alimentary canal affect life, in consequence of the nervous sympathy which subsists between these surfaces and the common sensorium, yet, that the same poisons applied externally to a wound produce their effects exclusively through the medium of the circulation, being conveyed to the brain only by mixing with the blood in the vessels, and not by being conveyed through the absorbents; for a ligature upon the great vessels prevents them from producing their deleterious effects: whereas a ligature upon the thoracic duct, or general canal, through which all the absorbents pour their contents into the blood, does not in the least retard or prevent the operation of the poison. There are also several of the mineral poisons, which, whether introduced into the stomach or applied externally to a wound, poison the animal, in consequence of being carried into the circulation. It had long been supposed that arsenic occasioned death by inflaming the stomach; but Mr. Brodie has clearly demonstrated that its influence arises from its being absorbed, and that its must be regarded as a vital rather than as a chemical agent. In the first place, he has found the inflammation of the stomach in several cases so slight, that on a superficial examination, it might have been easily overlooked; and in most of his experiments with arsenic, death took place in too short a time to be considered as the result of inflammation; and, in the next place, in whatever manner the poison is applied, whether externally to a wound, or internally to the membrane of the stomach, the inflammation is confined to the stomach and intestines.—*Paris' Pharm. 5th ed.*

METEOROLOGICAL OBSERVATIONS

FOR MARCH, 1823.

Made at the New-York Hospital, by RICHARD PENNELL, M. D.

	Barometer.			Thermometer.			Winds.			Rain Gauge.	Hygrometer.	Weather.
	7 A M	2 P M	9 P M	7 AM	2 PM	9 PM	7 AM	2 PM	9 PM			
1	30 30	30 24	30 20	12	32	32	w	w	se		650	cloudy
2	30 17	30 00	29 88	32	46	39	se	s	s		655	do
3	30 25	30 34	30 50	18	28	16	nw	nw	nw		643	clear
4	30 61	30 61	30 58	16	25	25	nw	nw	sw		640	do
5	30 47	30 38	30 26	28	48	42	sw	sw	sw	—.04	662	variable
6	30 00	29 87	29 68	46	48	42	s	s	s	—.90	740	cloudy
7	29 98	30 00	30 05	38	46	35	nw	sw	sw		700	variable
8	30 13	30 08	30 05	36	54	45	s	s	s		692	clear
9	30 05	30 14	30 28	38	48	35	s	n	n		700	cloudy
10	30 55	30 57	30 60	30	44	32	n	ne	ne		674	variable
11	30 60	30 34	30 08	29	34	43	e	e	s	—.98	687	cloudy
12	30 00	30 00	30 18	38	50	40	sw	w	w		682	do
13	30 22	30 18	30 10	38	53	45	nw	nw	s		678	do
14	29 88	29 52	29 56	40	51	46	s	ne	ne	—.68	675	do
15	29 68	29 89	30 00	42	52	31	nw	nw	nw		664	variable
16	30 04	30 08	29 94	34	48	41	nw	w	w		656	clear
17	29 83	29 78	29 72	46	62	40	sw	sw	ne		672	cloudy
18	29 68	29 16	29 28	38	46	42	ne	ne	sw	1.43	686	do
19	29 75	30 00	30 05	40	48	36	w	w	w		674	variable
20	30 05	29 88	29 94	32	34	31	ne	nw	nw		668	cloudy
21	30 00	30 06	30 11	32	36	32	nw	nw	nw		664	clear
22	30 16	30 10	30 06	48	50	39	sw	s	s		672	do
23	30 27	30 19	29 96	42	48	40	ne	ne	sw		692	cloudy
24	29 84	30 00	30 26	52	58	40	sw	w	nw		674	do
25	30 44	30 46	30 30	40	44	46	nw	sw	s		646	variable
26	30 24	30 00	29 86	36	30	32	ne	ne	ne		660	cloudy
27	30 00	30 14	30 14	40	48	36	ne	ne	s		654	variable
28	30 14	30 20	30 24	44	50	38	s	sw	sw		650	clear
29	30 30	30 16	30 00	46	58	40	nw	nw	se		654	do
30	29 87	29 38	29 20	40	33	32	se	se	se		666	cloudy
31	29 60	29 78	29 94	33	54	38	nw	nw	nw		660	do

The quantity of rain which fell this month, is 4 inches, and 3—100ths of an inch.

On the 9th of this month a little snow fell at 8 P. M. which instantly melted. On the night of the 19th there fell 7 inches on a level. Snow at 11 A. M. on the 26th, which continued gently falling all day, so that by night it was three inches deep At 9 A M on the 30th, a violent snow storm commenced, and continued until 8 A. M. On the 31st considerable damage was done to the shipping in various harbours of the United States, by the violence of the wind; and to the trees, from the weight of snow lodged on their branches On the 11th at 11 A. M. rain, (accompanied with hail for the space of half an hour,) which continued all day. At 7 A. M. on the 18th in rained; at 4 P M. thunder and lighting, accompanied with rain, amounting to 12—100ths. The sun was obscured on the 11th, 14th, 18th, 20th, 26th, and 30th, and part of the 2d and 31st.

METEOROLOGICAL OBSERVATIONS

FOR APRIL, 1823.

Made at the New-York Hospital, by RICHARD PENNELL, M. D.

	Barometer.			Thermometer.			Winds.			Rain Gauge.	Hygrometer.	Weather.
	7 A M	2 P M	9 P M	7 AM	2 PM	9 PM	7 AM	2 PM	9 PM			
1	30 05	30 14	30 22	45	58	39	nw	w	w		658	clear
2	30 32	30 34	30 22	46	60	44	sw	s	sw	—.01	643	variable
3	30 07	29 93	29 86	54	72	59	sw	s	s	—.04	674	cloudy
4	30 20	30 46	30 50	49	50	36	nw	nw	nw		644	clear
5	30 68	30 64	30 50	38	49	37	nw	s	s		652	do
6	30 37	30 20	30 12	44	69	56	sw	sw	sw		660	variable
7	30 00	30 00	29 87	55	68	57	sw	s	s	1.13	750	cloudy
8	29 80	30 05	30 32	58	58	38	w	nw	nw		724	variable
9	30 50	30 50	30 44	45	53	40	nw	nw	nw	—.03	674	do
10	30 25	30 00	30 00	40	49	40	se	ne	ne	—.06	700	cloudy
11	30 30	30 14	30 21	38	42	37	ne	ne	ne		684	do
12	30 28	30 34	30 36	42	51	40	n	n	n		662	clear
13	30 42	30 42	30 38	46	60	43	n	w	sw		654	do
14	30 35	30 30	30 38	50	66	46	sw	s	s		646	do
15	30 46	30 50	30 50	48	58	46	s	se	se		672	cloudy
16	30 47	30 47	30 42	48	52	53	cal.	se	se	—.02	698	do
17	30 38	30 30	30 29	52	70	61	se	s	s		750	do
18	30 27	30 30	30 34	62	72	64	s	sw	w	—.01	724	do
19	30 38	30 38	30 22	58	68	50	se	se	se	—.18	708	do
20	30 10	29 93	29 85	52	69	56	se	se	se	—.01	760	do
21	29 79	29 68	29 87	63	76	61	s	s	w	—.31	734	variable
22	30 00	30 17	29 98	58	69	47	ne	se	se	—.01	738	do
23	29 90	29 79	29 92	49	68	50	se	cal.	nw	—.35	730	cloudy
24	30 00	30 00	30 25	54	56	38	nw	nw	nw		692	clear
25	30 40	30 34	30 30	44	54	46	nw	s	s		670	do
26	30 27	30 27	30 20	52	75	60	sw	sw	sw		662	do
27	30 13	30 13	30 28	58	82	52	sw	sw	n	—.14	652	cloudy
28	30 50	30 50	30 50	42	50	44	ne	ne	ne		650	do
29	30 50	30 56	30 50	47	56	46	ne	sw	sw		658	do
30	30 49	30 46	30 40	48	60	47	se	ne	ne	—.10	675	do

The quantity of rain which fell this month is 2 inches 14—100ths of an inch.

This month was remarkably distinguished for its frequent and moderate rains, its moist atmosphere, and cloudy days. On the morning of the 7th a heavy fall of rain; at 8 P. M. thunder, &c. from the south. On the 21st thunder, &c. at 4 P M, for half an hour. Thick fog on the 1st, 3d, 6th, and 21st The sun was obscured on the 3d, 7th, 10th, 11th, 16th, 20th, and part of the 17th, 23d, 27th, and 28th. Vespertine lightning on the 26th from the east.

METEOROLOGICAL OBSERVATIONS

FOR MAY, 1823.

Made at the New-York Hospital, by Richard Pennell, M. D.

	Barometer.						Thermometer.			Winds.			Rain Gauge.	Hygrometer.	Weather.
	7 A M		2 P M		9 P M		7 AM	2 PM	9 PM	7 A M	2 P M	9 P M			
1	30	29	30	24	30	16	42	48	48	ne	ne	ne	—.13	685	cloudy
2	30	00	29	78	29	78	48	62	55	ne	w	nw	—.01	705	variable
3	29	78	29	70	29	66	58	72	57	nw	nw	nw		664	clear
4	29	62	29	68	29	74	58	70	46	nw	nw	nw		640	cloudy
5	29	90	29	90	30	04	48	55	42	nw	nw	nw		632	do
6	30	10	30	10	30	04	47	62	54	nw	nw	nw		624	clear
7	29	90	29	82	29	78	54	70	54	cal.	sw	sw	—.01	650	variable
8	29	60	29	60	29	60	50	49	44	ne	ne	ne	—.68	674	cloudy
9	29	60	29	87	29	90	48	60	46	ne	ne	ne		682	do
10	30	08	30	08	30	10	56	70	52	nw	nw	nw		656	clear
11	30	10	30	10	30	20	54	66	51	nw	nw	nw		643	variable
12	30	20	30	25	30	25	54	70	54	sw	sw	se	—.25	626	do
13	30	20	29	94	29	86	48	48	4?	se	ne	ne	1.09	656	cloudy
14	29	82	29	88	29	96	49	68	52	nw	nw	nw		664	variable
15	30	10	30	10	30	10	56	70	55	nw	s	s		660	clear
16	30	14	30	12	30	00	55	61	56	se	se	se	—.14	684	cloudy
17	29	94	30	00	30	22	58	82	59	sw	sw	sw		660	clear
18	30	22	30	22	30	22	62	80	58	sw	sw	sw		665	variable
19	30	22	30	28	30	18	60	89	70	se	sw	s	—.02	685	do
20	30	16	30	18	30	18	71	90	73	w	nw	se		670	clear
21	30	18	30	18	30	10	75	88	74	ne	ne	sw	—.45	665	variable
22	30	00	30	00	30	08	71	84	68	sw	w	nw		640	do
23	30	18	30	20	30	26	70	80	66	nw	nw	nw		604	do
24	30	34	30	36	30	28	61	64	60	ne	se	se		636	cloudy
25	30	00	29	94	30	18	70	80	64	sw	sw	nw	—.07	620	do
26	30	24	30	28	30	28	56	71	57	nw	nw	nw		593	do
27	30	03	30	18	30	24	58	74	58	ne	ne	sw		598	clear
28	30	30	30	16	30	04	60	70	60	sw	sw	sw	—.68	625	cloudy
29	29	89	29	80	29	80	64	65	64	sw	w	w	2.10	660	do
30	29	80	29	88	29	94	58	70	58	nw	nw	nw		630	do
31	30	10	30	18	30	25	55	73	58	nw	nw	nw		593	clear

The quantity of rain which fell this month is 5 inches and 63—100ths.

The weather during the month of May, was particularly distinguished by great transitions from heat to cold. The thermometrical range for the first sixteen days was considerably lower than for the same period the preceding year, whereby the progress of vegetation was materially retarded. From the 1st to the 16th, the thermometer at 2 P. M. was never above 72°, and from the 17th to the 23d, at the same hour, it was never below 80°. The wind was generally strong, and the atmosphere arid. Thunder, &c on the 16th, 21st, and 25th. Fog on the mornings of the 7th, 8th, 9th, and 17th The sun was obscured on the 1st, 8th, 18th, and 29th, and part of the 2d and 7th. Vespertine lightning on the 19th and 21st. The thermometer stood at 92° at half past 2 P. M, on the 20th.